

MTBE and Water Quality bibliography

Full listing of the bibliography, sorted by author.

Achten, Christine, and Puttmann, Wilhelm, 2000, Determination of methyl *tert*-butyl ether in surface water by use of solid-phase microextraction: *Environmental Science & Technology*, v. 34, no. 7, p. 1359-1364.

Ainsworth, Susan, 1992, Oxygenates seen as hot market by industry: *Chemical & Engineering News*, v. 70, no. 19, p. 29-30.

Alberta Research Council, 1994, Composition of Canadian summer and winter gasolines, 1993: Canadian Petroleum Products Institute Report No. 94-5, June 1994, p. A-65-A-11999, B-67-B-118.

Alexander, J.E., Ferber, E.P., and Stahl, W.M., 1994, Avoid leaks from reformulated fuels--Choose an elastomeric sealing material according to the type and concentration of oxygenate (ether and/or alcohol) added to the fuel: *Fuel Reformulation*, March/April, p. 42-46.

Allan, R.D., and Parmele, C.S., 1983, Treatment technology for removal of dissolved gasoline components from ground water, *in* National Symposium on Aquifer Restoration and Ground-Water Monitoring, 3d, Columbus, Ohio, May 25-27, 1983 [Proceedings]: Columbus, Ohio, p. 51-59.

Allen, Mark, and Grande, Dave, 1995, Reformulated gasoline air monitoring study: Madison, State of Wisconsin Department of Natural Resources, Bureau of Natural Resources, American Petroleum Institute Publication AM-175-95, 50 p.

American Conference of Governmental Industrial Hygienists, 1995, 1994-1995 Threshold limit values for chemical substances and physical agents and biological exposure indices: Cincinnati, Ohio, ACGIH, 100 p.

American Petroleum Institute, 1994, Odor threshold studies performed with gasoline and gasoline combined with MTBE, ETBE and TAME: Washington D.C., Health and Environmental Sciences, API Publication No. 4592, 74 p.

American Petroleum Institute, 1988, Alcohols and ethers--A technical assessment of their application as fuels and fuel components (2d ed.): Washington, D.C., Refining Department, American Petroleum Institute Publication No. 4261, 89 p.

American Petroleum Institute, 1998, Ten frequently asked questions about MTBE in water: Washington, D.C., Health and Safety Department, American Petroleum Institute Soil and Groundwater Research, Technical Bulletin No. 3, 2 p.

American Petroleum Institute, 1990, A compilation of field-collected cost and treatment effectiveness data for the removal of dissolved gasoline components from groundwater: Washington, D.C., Health and Sciences Department, American Petroleum Institute Publication No. 4525, 200 p.

American Petroleum Institute, 1997, Field evaluation of biological and non-biological treatment technologies to remove MTBE/oxygenates from petroleum product terminal wastewaters: Washington, D.C., Health and Sciences Department, American Petroleum Institute Publication No. 4655, 198 p.

American Petroleum Institute, 1997, Field studies of BTEX and MTBE intrinsic bioremediation: Washington, D.C., Health and Sciences Department, American Petroleum Institute Publication No. 4654, 241 p.

- American Petroleum Institute, 1998, Delineation and cacterization of the Borden MTBE plume--An evaluation of eight years of natural attenuation processes: Washington, D.C., Health and Sciences Department, American Petroleum Institute Publication No. 4668, 87 p.
- American Petroleum Institute, 2000, Strategies for characterizing subsurface releases of gasoline containing MTBE: Washington, D.C., Regulatory and Scientific Affairs, Publication No. 4699, 57 p.
- American Society for Testing and Materials, 1988, Standard test method for determination of C1 to C4 alcohols and MTBE in gasoline by gas chromatography, *in* American Society for Testing and Materials, annual book of ASTM standards: Philadelphia, Pa., ASTM, p. 631-635.
- Amerson-Treat, Illa, and Johnson, R.L., 1999, Natural attenuation of MTBE in an established ground water plume--A natural gradient tracer study, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 1-2.
- Ames, T.T., and Grulke, E.A., 1995, Group contribution method for predicting equilibria of nonionic organic compounds between soil organic matter and water: Environmental Science & Technology, v. 29, no. 9, p. 2273-2279.
- Anderson, E.V., 1993, Health studies indicate MTBE is safe gasoline additive: Chemical & Engineering News, v. 71, no. 38, p. 9-18.
- Anderson, H.A., Hanrahan, Lawrence, Goldring, Jay, and Delaney, Bryan, 1995, An investigation of health concerns attributed to reformulated gasoline use in southeastern Wisconsin: Wisconsin Department of Health and Social Services, Division of Health, Bureau of Public Health, Section of Environmental Epidemiology and Prevention, Final report, 99 p.
- Anderson, L.G., Wolfe, Pamela, Barrell, R.A., and Lanning, J.A., 1994, The effects of oxygenated fuels on the atmospheric concentrations of carbon monoxide and aldehydes in Colorado, *in* Sterrett, F.S., ed., Alternative fuels and the environment: Ann Arbor, Mich., Lewis Publishers, Inc., p. 75-103.
- Anderson, L.G., Wolfe, Pamela, and Wilkes, E.B., 1997, Effects and effectiveness of using oxygenated fuels in the Denver metropolitan area, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, p. 381-383.
- Anderson, M.A., 2000, Removal of MTBE and other organic contaminants from water by sorption to high silica zeolites: Environmental Science & Technology, v. 34, no. 4, p. 725-727.
- Andrews, Charles, 1998, MTBE--A long-term threat to ground water quality: Ground Water, v. 36, no. 5, p. 705-706.
- Angle, C.R., 1991, If the tap water smells foul, think MTBE: Journal of the American Medical Association, v. 266, no. 21, p. 2965-2966.
- Anthony, J.W., Henry, B.M., Wiedemeier, T.H., Gordon, E.K., Bidgood, J.B., Hinchee, R.E., and Hansen, J.E., 1999, Methodology to evaluate natural attenuation of methyl tertiary-butyl ether, *in* Alleman, B.C., and Leeson, Andrea, eds., Natural Attenuation of Chlorinated Solvents, Petroleum Hydrocarbons, and Other Organic Compounds, V. 1, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 121-133.
- Baehr, A.L., 1999, Occurrence of methyl *tert*-butyl ether (MTBE) throughout the hydrologic cycle in New Jersey [abs.], *in* EOS Transactions, 1999 Fall Meeting, San Francisco, Calif., Dec. 13-17, 1999: Washington, D.C., American Geophysical Union, v. 80, no. 46, Nov. 16, 1999 Supplement, p. F421.

- Baehr, A.L., Baker, R.J., and Lahvis, M.A., 1997, Transport of methyl *tert*-butyl ether across the water table to the unsaturated zone at a gasoline-spill site *in* Beaufort, S.C., *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, p. 417-418.
- Baehr, A.L., Stackelberg, P.E., Baker, R.J., Kauffman, L.J., Hopple, J.A., and Ayers, M.A., 1997, Design of a sampling network to determine the occurrence and movement of methyl *tert*-butyl ether and other organic compounds through the urban hydrologic cycle, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, p. 400-401.
- Baehr, A.L., Stackelberg, P.E., and Baker, R.J., 1999, Evaluation of the atmosphere as a source of volatile organic compounds in shallow groundwater: *Water Resources Research*, v. 35, no. 1, p. 127-136.
- Baehr, A.L., Kauffman, L.J., Charles, E.G., Baker, R.J., Stackelberg, P.E., Ayers, M.A., and Zapecza, O.S., 1999, Sampling throughout the hydrologic cycle to characterize sources of volatile organic compounds in ground water, *in* Morganwalp, D.W., and Buxton, H.T., eds., U.S. Geological Survey Toxics Hydrology Program--Technical Meeting, Volume 3, Subsurface Contamination from Point Sources, Charleston, S.C., Mar. 8-12, 1999 [Proceedings]: U.S. Geological Survey Water-Resources Investigations Report, WRIR 99-4018C, p. 21-26.
- Barcelona, M.J., and Jaglowski, D.R., 1999, Subsurface fate and transport of MTBE in controlled reactive tracer experiment, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 123-137.
- Barker, J.F., Hubbard, C.E., and Lemon, L.A., 1990, The influence of methanol and MTBE on the fate and persistence of monoaromatic hydrocarbons in groundwater: *Ground Water Management*, v. 4, p. 113-127.
- Barker, J.F., Schirmer, M., and Hubbard, C.E. 1996, The longer term fate of MTBE in the Borden Aquifer, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 13-15, 1996, [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 5-14.
- Barker, J.F., Schirmer, Mario, Butler, B.J. and Church, C.D., 1998, Fate and transport of MTBE in groundwater - results of a controlled field experiment in light of other experience, *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 10-14.
- Barreto, R.D., Gray, K.A., and Anders, Krista, 1995, Photocatalytic degradation of methyl-*tert*-butyl ether in TiO₂ slurries--a proposed reaction scheme: *Water Resources*, v. 29, no. 5, p. 1243-1248.
- Bartlett, Kristina, 1999, When good compounds go bad: *Geotimes*, v. 45, no. 1, p. 10-11.
- Bass, E., 1996, A review of treatment technologies for MTBE [abs.], *in* Society of Environmental Toxicology and Chemistry Abstract Book, 17th, Washington, D.C., Nov. 17-21, 1996: Washington, D.C., SETAC, p. 311.
- Baur, Christoph, Kim, Bongsoo, Jenkins, P.E., and Cho, Yong-Seok, 1990, Performance analysis of SI engine with ethyl tertiary butyl ether (ETBE) as a blending component in motor gasoline and comparison with other blending components, *in* Nelson, P.A., Schertz, W.W., and Till, R.H., eds., Intersociety Energy Conversion Engineering Conference, 25th, [Proceedings]: v. 4: New York, American Institute of Chemical Engineers, p. 337-342.

- Bealer, Buddy, Byrnes, J.P., and Springer, K., 1998, No purging ground-water sampling proposal for gasoline compounds in New Jersey unconfined aquifers, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association, and American Petroleum Institute, p. 474-482.
- Beckenbach, E.H., and Happel, A.M., 1998, Methyl tertiary butyl ether plume evolution at California LUFT sites, *in* The Southwest Focused Ground Water Conference-- Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 15.
- Begley, Ronald, and Rotman, David, 1993, Health complaints fuel federal concern over MTBE: Chemical Week, v. 152, no. 10, p. 7.
- Begley, Ronald, 1994, MTBE high demand time looms as health questions linger: Chemical Week, v. 155, no. 8, p. 13.
- Belpoggi, Fiorella, Soffritti, Morando, and Maltoni, Cesare, 1995, Methyl-tertiary-butyl ether (MTBE)--a gasoline additive--causes testicular and lymphohaematopoietic cancers in rats: Toxicology and Industrial Health, v. 11, no. 2, p. 1-31.
- Bender, D.A., Zogorski, J.S., Halde, M.J., and Rowe, B.L., 1999, Selection procedure and salient information for volatile organic compounds emphasized in the National Water-Quality Assessment Program: U.S. Geological Survey Open File Report 99-182, 32 p.
- Bennett, P.J., and Kerr, J.A., 1990, Kinetics of the reactions of hydroxyl radicals with aliphatic ethers studied under simulated atmospheric conditions--Temperature dependences of the rate coefficients: Journal of Atmospheric Chemistry, v. 10, no. 1-2, p. 27-38.
- Bhattacharya, A.K., and Boulanger, E.M., 1994, Organic carbonates as potential components of oxygenated gasoline [abs.], *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 208th, Washington, D.C.: ACS, v. 34, no. 2, p. 471-473.
- Bianchi, A., and Varney, M.S., 1989, Analysis of methyl *tert*-butyl ether and 1,2-dihaloethanes in estuarine water and sediments using purge-and-trap/gas-chromatography: Journal of High Resolution Chromatography, v. 12, no. 3, p. 184-186.
- Biles, R.W., Schroeder, R.E., and Holdsworth, C.E., 1987, Methyl tertiary butyl ether inhalation in rats--A single generation reproduction study: Toxicology and Industrial Health, v. 3, no. 4, p. 519-534.
- Bobro, C.H., Karas, L.J., Leaseburge, C.D., and Skahan, D.J., 1994, Decreased benzene evaporative emissions from an oxygenated fuel: Preprinted papers, *in* American Chemical Society Division of Fuel Chemistry preprints of papers: ACS, v. 39, no. 2, p. 305-309.
- Boggess, Kathy, 1994, Analysis of human blood specimens for methyl tertiary butyl ether (MTBE) and tertiary butyl alcohol (TBA): Kansas City, Mo., Midwest Research Institute, MRI Project No. 3454, 46 p. p.
- Bolton, J.R., Safarzadeh-Amiri, Ali, Cater, S.R., Dussert, Bertrand, Stefan, Mihael, and Mack, John, 1998, Mechanism and efficiency of the degradation of MTBE in contaminated groundwater by the UV/H₂O₂ Process, *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 36-39.

- Bonin, M.A., Ashley, D.L., Cardinali, F.L., McCraw, J.M., Moolenaar, R.L., Hefflin, B.J., Etzel, R.A., and Wooten, J.V., 1993, Measurement of methyl *tert*-butyl ether and butyl alcohols in whole human blood by purge-and-trap gas chromatography-mass spectrometry [abs.], in American Chemical Society Division of Environmental Chemistry preprints of papers, 206th, Chicago, Ill.: ACS, v. 33, no. 2, p. 21-24.
- Bonin, M.A., Ashley, D.L., Cardinali, F.L., McCraw, J.M., and Wooten, J.V., 1994, Measurement of methyl *tert*-butyl ether and *tert*-butyl alcohol in human blood and urine by purge-and-trap gas chromatography-mass spectrometry using an isotope-dilution method [abs.], in American Chemical Society Division of Environmental Chemistry preprints of papers, 208th, Washington, D.C.: ACS, v. 34, no. 2, p. 153-155.
- Bonin, M.A., Ashley, D.L., Cardinali, F.L., McCraw, J.M., and Wooten, J.V., 1995, Measurement of methyl *tert*-butyl ether and *tert*-butyl alcohol in human blood and urine by purge-and-trap gas chromatography-mass-spectrometry using an isotope-dilution method: Journal of Analytical Toxicology, v. 19, no. 3, p. 187-191.
- Borak, Jonathan, Pastides, Harris, Van Ert, Mark, Russi, Mark, and Herzstein, Jessica, 1998, Exposure to MTBE and acute human health effects--A critical literature review: Human and Ecological Risk Assessment, v. 4, no. 1, p 177-200.
- Borden, R.C., 1997, Intrinsic bioremediation of MTBE and BTEX--Field and laboratory results, in American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 426-427.
- Borden, R.C., Daniel, R.A., LeBrun, L.E., IV, and Davis, C.W., 1997, Intrinsic biodegradation of MTBE and BTEX in a gasoline-contaminated aquifer: Water Resources Research, v. 33, no. 5, p. 1105-1115.
- Bott, D.J., Dawson, W.M., Piel, W.J., and Karas, L.J., 1992, MTBE environmental fate: London, England, Arco Chemical Company, The Institute of Petroleum, November 26, 13 p.
- Boughton, C.J., and Lico, M.S., 1998, Volatile organic compounds in Lake Tahoe, Nevada and California, July-September 1997: U.S. Geological Survey Fact Sheet FS-055-98, 2 p.
- Bouzas, Alberto, Burguet, M.C., Monton, J.B., and Munoz, Rosa, 2000, Densities, viscosities, and refractive indices of the binary systems methyl *tert*-butyl ether + 2-methylpentane, + 3-methylpentane, + 2,3-dimethylpentane, and + 2,2,4-trimethylpentane at 298.15 K: Journal of Chemical & Engineering Data, v. 45, p. 331-333.
- Bradley, P.M., Landmeyer, J.E., and Chapelle, F.H., 1999, Aerobic mineralization of MTBE and *tert*-butyl alcohol by stream-bed sediment microorganisms: Environmental Science & Technology, v. 33, no. 11, p. 1877-1897.
- Bradley, P.M., Landmeyer, J.E., and Chapelle, F.J., 1999, Aerobic mineralization of MTBE and *t*-butanol by stream-bed-sediment microorganisms, in Morganwalp, D.W., and Buxton, H.T., eds., U.S. Geological Survey Toxic Substances Hyrdology Program--Technical Meeting, Volume 3, Subsurface Contamination from Point Sources, Charleston, S.C., Mar. 8-12, 1999 [Proceedings]: U.S. Geological Survey Water-Resources Investigations Report, WRIR 99-4018B, p. 87-92.
- Brady, J.F., Xiao, Fang, Ning, S.M., and Yang, C.S., 1990, Metabolism of methyl tertiary-butyl ether by rat hepatic microsomes: Archives of Toxicology, v. 64, no. 2, p. 157-160.
- Bravo, H.A., Camacho, R.C., Roy-Ocotla, G.R., Sosa, R.E., and Torres, R.J., 1991, Analysis of the change in atmospheric urban formaldehyde and photochemistry activity as a result of using methyl-*t*-butyl-

ether (MTBE) as an additive in gasolines of the metropolitan area of Mexico City: *Atmospheric Environment*, v. 25B, no. 2, p. 285-288.

Brown, Anthony, Farrow, J.R.C., Rodriguez, R.A., Jonhson, B.J., and Bellomo, A.J., 1997, Methyl tertiary butyl ether (MtBE) contamination of the city of Santa Monica drinking water supply, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference*, Houston, Tex., Nov. 12-14, [Proceedings]: Houston, Tex., National Ground Water Association, and American Petroleum Institute, p. 35-59.

Brown, Anthony, Devinny, J.S., Browne, T.E., and Chitwood, D., 1997, A review of treatment technologies for methyl tertiary butyl ether (MtBE) in drinking water, *in* The ACS 1997 Pacific Conference on Chemistry and Spectrometry: Komex.H2O Science, p. 1-19.

Brown, Anthony, Devinny, J.S., Davis, M.K., Browne, T.E., and Rodriguez, R.A., 1997, A review of potential technologies for the treatment of methyl tertiary butyl ether (MtBE) in drinking water, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference*, Houston, Tex., Nov. 12-14, 1997 [Proceedings]: Houston, Tex., National Ground Water Association, and American Petroleum Institute, p. 126-148.

Brown, Anthony, and Browne, Tom, 1998, Advanced oxidation processes, *in* Treatment technologies for removal of methyl tertiary butyl ether (MTBE) from drinking water--Air stripping, advanced oxidation processes (AOP), and granular activated carbon (GAC): Komex H2O Inc., (prepared for MTBE Research Partnership), p. 2-1 - 2-44.

Brown, Anthony, Devinny, J.S., Browne, T.E., and Rodriguez, R.A., 1998, Restoration of a public drinking water supply impacted by methyl tertiary butyl ether (MtBE) Contamination, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference*, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 535-550.

Brown, Anthony, Farrow, J.R.C., Rodriguez, R.A., and Johnson, B.J., 1998, Methyl tertiary butyl ether (MTBE) contamination of the city of Santa Monica drinking water supply - an update, *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, Proceedings: Anaheim, Calif., National Ground Water Association, p. 16-25.

Bruce, B.W., 1995, Denver's urban ground-water quality--Nutrients, pesticides, and volatile organic compounds: U.S. Geological Survey Fact Sheet FS-106-95, 2 p.

Bruce, B.W., and McMahon, P.B., 1996, Shallow ground-water quality beneath a major urban center--Denver, Colorado, USA: *Journal of Hydrology*, v. 186, p. 129-151.

Bruce, C.L., Gilbert, C.D., Johnson, R.L., and Johnson, P.C., 1998, Methyl *tert*-butyl ether removal by in situ air sparging in physical model studies, *in* Wickramanayake, G.B., and Hinchee, R.E., eds., *Physical, Chemical, and Thermal Technologies--Remediation of Chlorinated and Recalcitrant Compounds*, First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, Calif., May 18-21, 1998: Columbus, Ohio, Battelle Press, p. 293-299.

Brymer, D.A., Ogle, L.D., Jones, C.J., and Lewis, D.L., 1996, Viability of using SUMMA polished canisters for the collection and storage of parts per billion by volume level organics: *Environmental Science & Technology*, v. 30, no.1, p. 188-195.

Buchholtz, W.F., and Crow, W.L., 1990, Relating SARA Title III emissions to community exposure through ambient air quality measurements, *in* Air & Waste Management Association, Annual Meeting & Exhibition, 83rd, Pittsburgh, Pa., June 24-29, 1990, [Proceedings]: AWMA, p. 2-15.

- Burbacher, T.M., 1993, Neurotoxic effects of gasoline and gasoline constituents: Environmental Health Perspectives Supplements, v. 101, suppl. 6, p. 133-141.
- Burleigh-Flayer, H.D., Chun, J.S., and Kintigh, W.J., 1992, Methyl tertiary butyl ether--Vapor inhalation oncogenicity study in CD-1 mice: Export, Pa., Bushy Run Research Center, BRRC report 91N0013A, 1068 p.
- Buscheck, T.E., Gallagher, D.J., Peargin, T.R., Kuehne, D.L., and Zuspan, C.R., 1998, Occurrence and behavior of MTBE in groundwater, *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 2-3.
- Buttillo, J.V., Pulido, A.D., Reese, N.M., and Lowe, M.A., 1994, Removal efficiency of MTBE in water--Confirmation of a predictive model through applied technology, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., November 2-4, 1994, [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 91-105.
- Buxton, H.T., Landmeyer, J.E., Baehr, A.L., Church, C.D., and Tratnyek, P.G., 1997, Interdisciplinary investigation of subsurface contaminant transport and fate at point-source releases of gasoline containing MTBE, *in* Stanley, Anita, ed., Petroleum Hydrocarbon Conference--Prevention, Detection, and Restoration, Houston, Tex., Nov. 12-14, 1997, [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 2-18.
- Byrnes, J.P., Briglia, J.E., and Bealer, L.J.B., 1997, Purge vs. no purge for sampling BTEX and MTBE in groundwater, *in* Kostecki, P.T., Calabrese, E.J., and Bonazountas, Marc, eds., Contaminated Soils: Amherst, Mass., Amherst Scientific Publishers, v. 2, p. 681-693.
- Cabrera, A.E., and Galindo, M.A., 1990, Preliminary evaluation of oxygenated fuels in a laboratory engine at Mexico City, *in* Air & Waste Management Association, Annual Meeting & Exhibition, 83rd, Pittsburgh, Pa., June 2-29, 1990, [Proceedings]: AWMA, 13 p.
- Cain, W.S., Leaderer, B.P., Ginsberg, G.L., Andrews, L.S., Cometto-Muniz, J.E., Gent, J.F., Buck, Marion, Berglund, L.G., Mohsenin, Vahid, Monahan, Edward, and Kjaergaard, Soren, 1996, Acute exposure to low-level methyl tertiary-butyl ether (MTBE)--Human reactions and pharmacokinetic response: Inhalation Toxicology, v. 8, no. 1, p. 21-48.
- California Environmental Protection Agency, 1997, MTBE (methyl tertiary butyl ether): California Environmental Protection Agency, 23 p.
- Calvert, J.G., Heywood, J.B., Sawyer, R.F., and Seinfeld, J.H., 1993, Achieving acceptable air quality--Some reflections on controlling vehicle emissions: Science, v. 261, no. 5117, p. 37-45.
- Canadian Environmental Protection Act, 1992, Priority substances list, assessment report no. 5, methyl tertiary-butyl ether: Government of Canada, Beauregard Printers Limited, 17 p.
- Carpenter, P.L., and Vinch, C.A., 1997, Remediation of overlapping benzene/MTBE and MTBE-only plumes--A case study, *in* Stanley, Anne, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 12-14, 1997, [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 74-88.
- Cater, S.R., Stefan, M.I., Bolton, J.R., and Safarzadeh-Amiri, Ali, 2000, UV/H₂O₂ Treatment of methyl *tert*-butyl ether in contaminated waters: Environmental Science & Technology, v. 34, no. 4, p. 659-662.

- Chang, Tan-yueh "Philip", Winkley, W.B., and Montgomery, J.H., 1998, Utilizing Baetsle's equation to model the fate and migration of MTBE in groundwater, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association, and American Petroleum Institute, p. 18-30.
- Chapelle, F.H., 1999, Bioremediation of petroleum hydrocarbon-contaminated ground water--The perspectives of history and hydrology: *Ground Water*, v. 37, no. 1, p. 122-1323.
- Chatin, L., Fombarlet, C., Bernasconi, C., Gauthier, A., and Schmelzle, P., 1994, ETBE as a gasoline blending component--The experience of Elf Aquitaine: Society of Automotive Engineering, [Spec. Publ.] SP-1054 (Gasoline--Composition and additives to meet the performance and emission requirements of the nineties), p. 1-10.
- Chemical & Engineering News, 1994a, Growth continues in chemical production: v. 72, no. 27, p. 30-36.
- Chemical Marketing Reporter, 1992, RFG opening up pitfalls for oxygenates producers: v. 242, no. 16, p. 7, 19.
- Chen, C.T., and Tafuri, A.T., Oxidation of methyl-*t*-butyl ether (MTBE) using Fenton's Reagent, *in* Annual Meeting and Exhibition, 88th, San Antonio, Tex., June 18-23, 1998 [Proceedings]: San Antonio, Tex., Air & Waste Management Association, p. 1-15.
- Chen, C.S., and Delfino, J.J., 1996, Facilitated solubilization of polynuclear aromatic hydrocarbons by the cosolvent effect of oxygenated fuel additives and alternative fuels [abs.], *in* American Chemical Society Division of Environmental Chemistry preprints of extended abstracts, 212th, Orlando, FL: ACS, v. 36, no. 2, p. 312-314.
- Chiang, C.Y., Loos, K.R., and Klopp, R.A., 1992, Field determination of geological/chemical properties of an aquifer by cone penetrometry and headspace analysis: *Ground Water*, v. 30, no. 3, p. 428-436.
- Cho, J.S., and Wilson, J.T., 1999, Hydrocarbon and MTBE removal rates during natural attenuation application, *in* Alleman, B.C., and Leeson, Andrea, eds., Natural Attenuation of Chlorinated Solvents, Petroleum Hydrocarbons, and Other Organic Compounds, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 109-114.
- Church, C.D., Pankow, J.E., and Tratnyek, P.G., 1999, Hydrolysis of *tert*-butyl formate--Kinetics, products, and implications for the environmental impact of methyl *tert*-butyl ether: *Environmental Toxicology and Chemistry*, v. 18, no. 12, p. 2789-2796.
- Church, C.D., Isabelle, L.M., Pankow, J.F., Tratnyek, P.G., and Rose, D.L., 1997, Assessing the in situ degradation of methyl *tert*-butyl ether (MTBE) by product identification at the sub-ppb level using direct aqueous injection GC/MS, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 411-413.
- Church, C.D., Isabelle, L.M., Pankow, J.F., Rose, D.L., and Tratnyek, P.G., 1997, Method for determination of methyl-*tert*-butyl ether (MTBE) and its degradation products in water: *Environmental Science & Technology*, v. 31, no. 12, p. 3723-3726.
- Church, C.D., Tratnyek, P.G., Pankow, J.F., Landmeyer, J.E., Baehr, A.L., Thomas, M.A., and Schirmer, Mario, 1999, Effects of environmental conditions on MTBE degradation in model column aquifers, *in* Morganwalp, D.W., and Buxton, H.T., eds., U.S. Geological Survey Toxics Hydrology Program--Technical Meeting, Volume 3, Subsurface Contamination from Point Sources, Charleston, S.C., Mar.

- 8-12, 1999 [Proceedings]: U.S. Geological Survey Water-Resources Investigations Report, WRIR 99-4018C, p. 93-102.
- Clark, A.Q., McBain, S.E., Kilner, John, 1997, Vapour-liquid equilibrium of (ethers + hydrocarbons or methanol or water) for motor gasoline modelling: *Fluid Phase Equilibria*, v. 133, p. 239-246.
- Clark, C.R., Dutcher, J.S., Henderson, T.R., McClellan, R.O., Marshall, W.F., Naman, T.M., and Seizinger, D.E., 1984, Mutagenicity of automotive particulate exhaust--Influence of fuel extenders, additives, and aromatic content, *in* MacFarland, H.N., Holdsworth, C.E., MacGregor, J.A., Call, R.W., and Lane, M.L., eds., *Applied toxicology of petroleum hydrocarbons*: Princeton, N.J., Princeton Scientific Publishers, p. 109-122.
- Clark, J.J., Rodriguez, R.A., Brown, A., and Johnson, B.J., 1998, Public health implications of MTBE and perchlorate in water--Risk management decisions for water purveyors, *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 67-70.
- Clayton Environmental Consultants, 1993, Gasoline vapor exposure assessment at service stations: Washington, D.C., Health and Environmental Sciences Department, American Petroleum Institute Publication No. 4553, May, 140 p.
- Cline, P.V., Delfino, J.J., and Rao, P.S.C., 1991, Partitioning of aromatic constituents into water from gasoline and other complex solvent mixtures: *Environmental Science & Technology*, v. 25, no. 5, p. 914-920.
- Cochrane, R.A., and Hillman, D.E., 1984, Direct gas chromatographic determination of alcohols and methyl *tert*-butyl ether in gasolines using infrared detection: *Journal of Chromatography*, v. 287, no. 1, p. 197-201.
- Cohen, Yoram, 1993 [1991], Partitioning of organic pollutants in the environment, *in* Managing hazardous air pollutants--First international conference, Washington, D.C., November 4-6, 1991: Chelsea, Mich., Lewis Publishers, Inc., p. 278-295.
- Coker, D.T., van den Hoed, N., Saunders, K.J., and Tindle, P.E., 1989, A monitoring method for gasoline vapour giving detailed composition: *Annual Occupational Hygiene*, v. 33, no. 1, p. 15-26.
- Colucci, J.M., and Benson, J.D., 1992 [1993], Impact of reformulated gasoline on emissions from current and future vehicles, *in* Strauss, K.H. and Dukek, W.G., eds., *The impact of U.S. environmental regulations on fuel quality*: Ann Arbor, Mich., American Society for Testing and Materials, p. 105-123.
- Conaway, C.C., Schroeder, R.E., and Snyder, N.K., 1985, Teratology evaluation of methyl tertiary butyl ether in rats and mice: *Journal of Toxicology and Environmental Health*, v. 16, no. 6, p. 797-809.
- Connor, B.F., Rose, D.L., Noriega, M.C., Murtagh, L.K., and Abney, S.R., 1997, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory, including detections less than reporting limits: U.S. Geological Survey Open-File Report OFR 97-829, 78 p.
- Conrad, D.L., 1995, The impacts of gasoline/oxygenate releases to the environment--A review of the literature: Port Arthur, Texas, Texaco Research & Development Department, 48 p.
- Cook, J.R., Enns, Phil, and Sklar, M.S., 1997, Impact of the oxyfuel program on ambient CO levels, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 379-381.

- Cooney, C.M., 1999, EPA puts MTBE water degradation before air quality benefits: Environmental Science & Technology, v. 33, no. 19, p. 401A-402A.
- Corcho, D., Linton, J.D., Watkinson, R.J., and Lerner, D., 1998, Biodegradation of methyl *tert*-butyl ether by a mixed bacterial culture: Contaminated Soil, p. 919-920.
- Corseuil, H.X., and Fernandes, Marilda, 1999, Co-solvency effect in aquifers contaminated with ethanol-amended gasoline, *in* Alleman, B.C., and Leeson, Andrea, eds., Natural Attenuation of Chlorinated Solvents, Petroleum Hydrocarbons, and Other Organic Compounds, V. 1, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Battelle Publications, p. 135-140.
- Cowan, R.M., and Park, Keeyong, 1996, Biodegradation of the gasoline oxygenates MTBE, ETBE, TAME, TBA, and TAA by aerobic mixed cultures, *in* Weber, S.A., ed., Mid-Atlantic Industrial and Hazardous Waste Conference, 28th, Buffalo, N.Y., July 14-17, 1996 [Proceedings]: Buffalo, N.Y. State Center for Hazardous Waste Management, and Department of Civil Engineering, University of Buffalo, p. 523-530.
- Cornitius, Tim, 1996, California air rules foster MTBE demand: Chemical Week, v. 158, no. 27, p. 33.
- Coto, Baudilio, 2000, Prediction of phase equilibria for binary and ternary mixtures involving *tert*-butyl ether and *tert*-amyl methyl ether: Industrial & Engineering Chemistry Research, v. 39, p. 767-774.
- Cox, R.A., and Goldstone, Annmarie, 1981 [1982], Atmospheric reactivity of oxygenated motor fuel additives, *in* Versino, B. and Ott, H., eds., Physico-chemical behaviour of atmospheric pollutants, European Symposium, 2nd, Varese, Italy, September 29-October 1, 1981 [Proceedings]: Boston, Mass., D. Reidel Publishing Company, p. 112-119.
- Creek, D.M., and Davidson, J.M., 1998, The performance and cost of MTBE remediation technologies, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 560-568.
- Crowley, J.S., and Tulloch, Chris, 1998, Santa Clara Valley Water District's leaking UST oversight program "MTBE issues in Santa Clara County ground water supplies", *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 26-35.
- Dale, M.S., Losee, R.F., Crofts, E.W., and Davis, M.K., 1997, MTBE--Occurrence and fate in source-water supplies, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 276-377.
- Dale, M.S., Moylan, M.S., Koch, Bart, and Davis, M.K., 1997, MTBE--Taste-and-odor threshold determinations using the flavor profile method: La Verne, Calif., Metropolitan Water District of Southern California, 12 p.
- Daly, M.H., and Lindsey, B.D., 1996, Occurrence and concentrations of volatile organic compounds in shallow ground water in the Lower Susquehanna River Basin, Pennsylvania and Maryland: Denver, Colo., U.S. Geological Survey Water-Resources Investigations Report 96-4141, 8 p.
- Daniel, R.A., 1995, Intrinsic bioremediation of BTEX and MTBE--Field, laboratory and computer modeling studies: Raleigh, North Carolina State University, Master's thesis, 325 p.

- Davidson, J.M., 1995a, Fate and transport of MTBE--The latest data, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., 1995, [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 285-301.
- Davidson, J.M., 1995b, Groundwater health issues of MTBE--Sources, MTBE in precipitation, MTBE in ground water, fate & transport, MTBE in drinking water: Reformulated Gasoline Workshop, October 12, 1995, [Proceedings], 18 p.
- Davidson, J.M., and Parsons, Rick, 1996, Remediating MTBE with current and emerging technologies, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 13-15, 1996, [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 15-29.
- Davidson, Jim, and Creek, Dan, 1998, Granular activated carbon, *in* Treatment technologies for removal of methyl tertiary butyl ether (MTBE) from drinking water--Air stripping, advanced oxidation processes (AOP), and granular activated carbon (GAC): Alpine Environmental Inc., prepared for MTBE Research Partnership, p. 3-1 - 3-48.
- Davidson, J.M., and Creek, D.N., 2000, Using the gasoline additive MTBE in forensic environmental investigations: Environmental Forensics, v. 1, p. 31-36.
- Defibaugh, S.T., and Fischman, D.S., 1999, Biodegradation of MTBE utilizing a magnesium peroxide compound--A case study, *in* Alleman, B.C., and Leeson, Andrea, eds., In Situ Bioremediation of Petroleum Hydrocarbons and Other Organic Compounds, V. 3, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Battelle Publications, p. 1-6.
- Delzer, G.C., Zogorski, J.S., Lopes, T.J., and Bosshart, R.L., 1996, Occurrence of the gasoline oxygenate MTBE and BTEX compounds in urban stormwater in the United States, 1991-95: U.S. Geological Survey Water-Resources Investigation Report WRIR 96-4145, 6 p.
- Delzer, G.C., Zogorski, J.S., and Lopes, T.J., 1997, Occurrence of the gasoline oxygenate MTBE and BTEX compounds in municipal stormwater in the United States, 1991-95, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 374-376.
- Delzer, G.C., and Setmire, J.G., 1999, Quality of methyl *tert*-butyl ether (MTBE) data for ground-water samples collected during 1993-95 as part of the National Water-Quality Assessment Program: U.S. Geological Survey Fact Sheet FS-101-99, 4 p.
- Denton, J., and Mazur, L., 1996, California's cleaner burning gasoline and methyl tertiary butyl ether [abs.], *in* Society of Environmental Toxicology and Chemistry abstract book, 17th, Washington, D.C., November 17-21, 1996: Washington, D.C., SETAC, p. 115.
- Department of the Environment, and Department of National Health and Welfare, 1993, Assessment of the priority substance methyl tertiary-butyl ether--Extract: Canada Gazette, Part I, January 30, p. 262-264.
- Diehl, J.W., Finkbeiner, J.W., and DiSanzo, F.P., 1995, Determination of ethers and alcohols in reformulated gasolines by gas chromatography/atomic emission detection: Journal of High Resolution Chromatography, v. 18, no. 2, p. 108-110.
- Dolislager, L.J., 1997, The effect of California's wintertime oxygenated fuels program on ambient carbon monoxide concentrations: Journal of Air & Waste Management Association, v. 47, p. 775-783.

- Drew, R.T., 1995, Misunderstood MTBE: Environmental Health Perspectives, v. 103, no. 5, p. 420.
- Drobat, P.A., Bleckrann, C.A., and Agrawal, Abinash, 1997, Determination of the cometabolic biodegradation potential of methyl tertiary butyl ether in laboratory microcosms, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 405-406.
- Duffy, J.S., Del Pup, J.A., and Kneiss, J.J., 1992, Toxicological evaluation of methyl tertiary butyl ether (MTBE)--Testing performed under TSCA consent agreement: Journal of Soil Contamination, v. 1, no. 1, p. 29-37.
- Duffy, L.K., 1994, Oxyfuel in Alaska--Use of interleukins to monitor effects on the immune system: The Science of the Total Environment, v. 151, no. 3, p. 253-256.
- Durrant, G.C., Schirmer, Mario, Einarson, M.D., Wilson, R.D., and Mackay, D.M., 1999, Assessment of the dissolution of gasoline containing MTBE at LUST Site 60, Vandenberg Air Force Base, California, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 158-166.
- Dvorak, B.I., Lawler, D.F., Speitel, G.E., Jr., Jones, D.L., and Broadway, D.A., 1993, Selecting among physical/chemical processes for removing synthetic organics from water: Water Environment Research, v. 65, no. 7, p. 827-838.
- Einarson, M.D., Schirmer, Mario, Pezeshkpour, Parsa, Mackay, D.M., and Wilson, R.D., 1999, Comparison of eight innovative site characterization tools used to investigate an MTBE plume at Site 60, Vandenberg Air Force Base, California, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 147-157.
- Eweis, J.B., Schroeder, E.D., Chang, D.P.Y., and Scow, K.M., 1998, Biodegradation of MTBE in a pilot-scale biofilter, *in* Wickramanayake, G.B., and Hinchee, R.E., eds., Physical, Chemical and Thermal Technologies--Remediation of Chlorinated and Recalcitrant Compounds, First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, Calif., May 18-21, 1998: Columbus, Ohio, Battelle Press, p. 341-346.
- Eweis, J.B., Watanabe, Naoko, Schroeder, E.D., Chang, D.P.Y., and Scow, K.M., 1998, MTBE biodegradation in the presence of other gasoline components, *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 55-62.
- Fayolle, Françoise, Le Roux, Françoise, Hernandez, Guillermina, and Vandecasteele, Jean-Paul, 1999, Mineralization of ethyl *t*-butyl ether by defined mixed bacterial cultures, *in* Alleman, B.C., and Leeson, Andrea, eds., In Situ Bioremediation of Petroleum Hydrocarbons and Other Organic Compounds, V. 3, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 25-30.
- Fiedler, Nancy, Mohr, S.N., Kelly-McNeil, Kathie, and Kipen, H.M., 1994, Response of sensitive groups to MTBE: Inhalation Toxicology, v. 6, no. 6, p. 539-552.
- Fite, C., Tejero, J., Iborra, M., Cunill, F., and Izquierdo, F.J., 1997, Effect of solubility parameter on the MTBE synthesis kinetics, *in* Froment, G.F., and Waught, K.C., eds., Dynamics of Surface and Reaction Kinetics in Heterogeneous Catalysis, The International Symposium on Studies in Surface

Science and Catalysis, Antwerp, Belgium, September 15-17 [Proceedings]: Elsevier Science, Amsterdam, The Netherlands, p. 541-546.

Fortin, N.Y., and Deshusses, M.A., 1999, Treatment of methyl *tert*-butyl ether vapors in biotrickling filters. 1. Reactor startup, steady-state performance, and culture characteristics: *Environmental Science & Technology*, v. 33, no. 17, p. 2980-2986.

Fortin, N.Y., and Deshusses, M.A., 1999, Treatment of methyl *tert*-butyl ether vapors in biotrickling filters. 2. Analysis of the rate-limiting step and behavior under transient conditions: *Environmental Science & Technology*, v. 33, no. 17, p. 2987-2991.

Fortin, N.Y., and Deshusses, M.A., 1999, Gas phase biotreatment of MTBE, in Alleman, B.C., and Leeson, Andrea, eds., *Bioreactor and Ex Situ Biological Treatment Technologies*, V. 5, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 129-134.

Frank, R.J., and Huntley, David, 1997, Processes affecting free-phase hydrocarbon removal by vapor extraction, in Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference*, Houston, Tex., Nov. 12-14, 1997 [Proceedings]: Houston, Tex., National Ground Water Association, and American Petroleum Institute, p. 772-733.

Freed, C.N., 1997, EPA fuel programs, in American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 366-368.

Fuels for the Future, 1994, A report on clean renewable fuels vs. dirty contaminated water and Liberty Village, Sullivan County, N.Y.: Washington, D.C., November, 11 p.

Fujiwara, Yasuo, Konoshita, Tatsuo, Sato, Hiroshi, and Kojima, Ichiro, 1984, Biodegradation and bioconcentration of alkyl ethers: *Yukagatu*, v. 33, no. 2, p. 111-115 [Abs. and illus. in English.].

Gabele, P.A., and Pyle, S.M., 2000, Emissions from two outboard engines operating on reformulated gasoline containing MTBE: *Environmental Science & Technology*, v. 34, no. 3, p. 368-372.

Garnier, Patrice, Auria, Richard, Magana, Miguel, and Revah, Sergio, 1999, Cometabolic biodegradation of methyl *T*-butyl ether by a soil consortium, in Alleman, B.C., and Leeson, Andrea, eds., *In Situ Bioremediation of Petroleum Hydrocarbons and Other Organic Compounds*, V. 3, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 31-35.

Garrett, Peter, Moreau, Marcel, and Lowry, J.D., 1986, MTBE as a ground water contaminant, in *Conference on Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Restoration*, Houston, Tex., November 12-14, 1986, [Proceedings]: Dublin, Ohio, National Ground Water Association, p. 227-238.

Gerry, F.S., Schubert, A.J., McNally, M.J., and Pahl, R.H., 1992, Test fuels--Formulation and analyses--The auto/oil air quality improvement research program: Society of Automotive Engineers paper 920324, p. 335-357.

Gilbert, C.E., and Calabrese, E.J., 1992, Developing a standard for methyl tertiary butyl ether in drinking water, in Gilbert, C.E. and Calabrese, E.J., eds., *Regulating drinking water quality*: Ann Arbor, Mich., Lewis Publishers, Inc., p. 231-252.

Ging, P.B., Judd, L.J., and Wynn, K.H. 1997, Water-quality assessment of South Central Texas--Occurrence and distribution of volatile organic compounds in surface water and ground water, 1983-

94, and implications for future monitoring: U.S. Geological Survey Water-Resources Investigations Report, WRIR 97-4028, 20 p.

Gomez-Taylor, M.M., Abernathy, C.O., and Du, J.T., 1997, Drinking water health advisory for methyl tertiary-butyl ether, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 370-372.

Grady, S.J., 1996, Detections of MTBE in surficial and bedrock aquifers in New England [abs.], *in* Society of Environmental Toxicology and Chemistry Annual Meeting abstract book, 17th, Washington, D.C., November 17-21, 1996: Washington, D.C., SETAC, p. 115.

Grady, S.J., 1997, Distribution of MTBE in ground water in New England by aquifer type and land use, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 392-394.

Grady, S.J., 1997, Volatile organic compounds in ground water in the Connecticut, Housatonic, and Thames River Basins, 1993-1995: U.S. Geological Survey Fact Sheet FS-029-97, 6 p.

Grady, S.J., 1999, Assessment of MTBE in drinking water in 10 Eastern States [abs.], *in* EOS Transactions, 1999 Fall Meeting, San Francisco, Calif., Dec. 13-17, 1999: Washington, D.C., American Geophysical Union, v. 80, no. 46, Nov. 16, 1999 Supplement, p. F420-F421.

Grady, S.J., and Mullaney, J.R., 1998, Natural and human factors affecting shallow water quality in surficial aquifers in the Connecticut, Housatonic, and Thames River Basins: U.S. Geological Survey Water-Resources Investigations Report, WRIR 98-4042, 81 p.

Grady, S.J., and Casey, G.D., 1999, A plan for assessing the occurrence and distribution of methyl *tert*-butyl ether and other volatile organic compounds in drinking water and ambient ground water in the Northeast and Mid-Atlantic regions of the United States: U.S. Geological Survey Open-File Report, OFR 99-207, 36 p.

Graves, K.L., and MacLeod, N.S., 1998, A basin protection strategy for sites with MTBE impacts, *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 71-75.

Graves, K.L., and MacLeod, N.S., 1998, A basin protection strategy for sites with MTBE impacts, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 12-17.

Green, Aaron, Paillet, F.L., and Gurrieri, J.T., 1992, A multi-faceted evaluation of a gasoline contaminated bedrock aquifer in Connecticut [abs.]: Geological Society of America Abstracts with Programs, v. 24, no. 3, p. 25.

Gregorski, David, 1995, Special study report--Investigating the relationship between the use of a gasoline additive (MTBE) and ambient air formaldehyde levels: Hartford, Conn., Bureau of Air Management, Monitoring and Radiation Division, Department of Environmental Protection, 17 p.

Grosjean, D., Grosjean, E., and Rasmussen, R.A., 1997, Atmospheric chemistry and urban air concentrations of MTBE and ethanol, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 378-379.

- Grosjean, E., Grosjean, D., Gunawardena, R., and Rasmussen, R.A., 1998, Ambient concentrations of ethanol and methyl *tert* buty-ether in Porto Alegre, Brazil, March 1996-April 1997: *Environmental Science & Technology*, v. 32, no. 6, p. 736-742.
- Groves, F.R., Jr., 1988, Effect of cosolvents on the solubility of hydrocarbons in water: *Environmental Science & Technology*, v. 22, no. 3, p. 282-286.
- Gullick, R.W., and LeChevallier, M.W., 2000, Occurrence of MTBE in drinking water sources: *American Water Works Association*, v. 92, no.1, p. 100-113.
- Halde, M.J., Delzer, G.C., and Zogorski, J.S., 1998, Study design and analytical results used to evaluate a surface-water point sampler for volatile organic chemicals: U.S. Geological Survey Open-File Report, OFR 98-651, 31 p.
- Halden, R.U., Schoen, S.R., Galperin, Yakov, Kaplan, I.R., and Happel, A.M., 1998, Evaluation of EPA and ASTM methods for analysis of oxygenates in gasoline--Contaminated ground water, *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 1.
- Hall, J.R., 1992, Part 2--Cleaner products--A refining challenge: *Hydrocarbon Processing*, v. 71, no. 5, p. 100-C-100-F.
- Hanson, J.R., Ackerman, C.E., and Scow, K.M., 1999, Biodegradation of methyl *tert*-butyl ether by a bacterial pure culture: *Applied and Environmental Microbiology*, v. 65, no. 11, p. 4788-4792.
- Happel, A.M., Beckenbach, Edwin, Savalin, Leo, Temko, Heidi, Rempel, Rick, Dooher, Brendan, and Rice, Dave, 1997, Analysis of dissolved benzene plumes and methyl tertiary butyl ether (MTBE) plumes in ground water at leaking underground fuel tank (LUFT) sites, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 409-411.
- Happel, A.M., Beckenbach, E.H., and Halden, R.U., 1998, An evaluation of MTBE impacts to California groundwater resources: Livermore, Calif., Lawrence Livermore National Laboratory, UCRL-AR-130897, 68 p.
- Hardisty, P.E., and Schroder, R.A., 1996, Fracture-controlled transport of MTBE, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference*, Houston, Tex., Nov. 13-15, Proceedings: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 31-44.
- Hardisty, P.E., Kramer, Erik, and Brown, Anthony, 1999, Economic analysis of remedial objective alternatives for Mtbbe contaminated aquifers, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation*, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 191-201.
- Hartle, Richard, 1993, Exposure to methyl *tert*-butyl ether and benzene among service station attendants and operators: *Environmental Health Perspectives Supplements*, v. 101, suppl. 6, p. 23-26.
- Hartley, W.R., and Englande, A.J., Jr., 1992, Health risk assessment of the migration of unleaded gasoline--A model for petroleum products: *Water Science & Technology*, v. 25, no. 3, p. 65-72.

- Hartley, W.R., Englande, A.J., Jr., and Harrington, D.J., 1999, Health risk assessment of groundwater contaminated with methyl tertiary butyl ether (MTBE): *Water Science Technology*, v. 39, no. 10-11, p. 305-310.
- Haslam, Bob, 1996, A moving story--MTBE at Summit Lodge--Killington, Vermont: New England Interstate Water Pollution Control Commission, Bulletin 24, July, p. 15.
- Hitzig, Robert, Kostecki, Paul, and Leonard, Denise, 1998, Study reports LUST programs are feeling effects of MTBE releases: *Soil & Groundwater Cleanup*, Aug.-Sept. Issue, p. 15-19.
- Hoekman, S.K., 1992, Speciated measurements and calculated reactivities of vehicle exhaust emissions from conventional and reformulated gasolines: *Environmental Science & Technology*, v. 26, no. 6, p. 1206-1216.
- Hoekman, S.K., 1993, Improved gas chromatography procedure for speciated hydrocarbon measurements of vehicle emissions: *Journal of Chromatography*, v. 639, no. 2, p. 239-253.
- Hogue, Cheryl, 2000, Getting the MTBE out: *Chemical and Engineering News*, v. 78, no. 13, p. 6.
- Hong, Song, Duttweiler, C.M., and Lemley, A.T., 1999, Analysis of methyl *tert*-butyl ether and its degradation products by direct aqueous injection onto gas chromatography with mass spectrometry or flame ionization detection systems: *Journal of Chromatography A Including Electrophoresis, Mass Spectrometry, and other Separation and Detection Methods*, v. 857, p. 205-216.
- Horan, C.M., and Brown, E.J., 1995, Biodegradation and inhibitory effects of methyl-tertiary-butyl ether (MTBE) added to microbial consortia, *in* Annual Conference on Hazardous Waste Research, 10th, Manhattan, Kansas State University, May 23-24, 1995, [Proceedings]: p. 11-19.
- Howard, P.H., Boethling, R.S., Jarvis, W.F., Meylan, W.M., and Michalenko, E.M., 1991, Handbook of environmental degradation rates: Chelsea, Mich., Lewis Publishers, Inc., p. 653-654.
- Howard, P.H., ed., 1993, Handbook of environmental fate and exposure data for organic chemicals: Ann Arbor, Mich., Lewis Publishers, Inc., v. IV, p. 71-75.
- Hsieh, C.R., and Ouimette, J.R., 1994, Comparative study of multimedia modeling for dynamic partitioning of fossil fuels-related pollutants: *Journal of Hazardous Materials*, v. 37, no. 3, p. 489-505.
- Hubbard, C.E., Barker, J.F., and Vandegriendt, M., 1994, Transport and fate of dissolved methanol, methyl-tertiary-butyl-ether, and monoaromatic hydrocarbons in a shallow sand aquifer--Appendix H--Laboratory biotransformation studies: Washington, D.C., Health and Environmental Sciences Department, American Petroleum Institute Publication No. 4601, 75 p.
- Hubbard, C.E., Barker, J.F., O'Hannesin, S.F., Vandegriendt, M., and Gillham, R.W., 1994, Transport and fate of dissolved methanol, methyl-tertiary-butyl-ether, and monoaromatic hydrocarbons in a shallow sand aquifer: Washington, D.C., Health and Environmental Sciences Department, American Petroleum Institute Publication No. 4601, 102 p.
- Hunt, C.S., Cronkhite, L.A., Corseuil, H.X., and Alvarez, P.J.J., 1997, Effect of ethanol on anaerobic toluene degradation in aquifer microcosms, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 424-426.
- Huntley, David, and Beckett, G.D., 1999, Relationship between risk reduction and Lnapl recovery, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p.26-40.

- Hurt, K.L., Wilson, J.T., Beck, F.P., and Cho, J.S., 1999, Anaerobic biodegradation of MTBE in a contaminated aquifer, *in* Alleman, B.C., and Leeson, Andrea, eds., Natural Attenuation of Chlorinated Solvents, Petroleum Hydrocarbons, and Other Organic Compounds, V. 1, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 103-114.
- Hutcheon, D.E., Arnold, J.D., ten Hove, Willem, and Boyle, Joseph III, 1996, Disposition, metabolism, and toxicity of methyl tertiary butyl ether, an oxygenate for reformulated gasoline: *Journal of Toxicology and Environmental Health*, v. 47, no. 5, p. 453-464.
- Hyman, Michael, and O'Reilly, Kirk, 1999, Physiological and enzymatic features of MTBE-degrading bacteria, *in* Alleman, B.C., and Leeson, Andrea, eds., In Situ Bioremediation of Petroleum Hydrocarbons and Other Organic Compounds, V. 3, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 7-12.
- Hyman, Michael, Kwon, Paul, Williamson, Kenneth, and O'Reilly, Kirk, 1998, Cometabolism of MTBE by alkane-utilizing microorganisms, *in* Wickramanayake, G.B., and Hinchee, R.E., eds., Physical, Chemical and Thermal Technologies--Remediation of Chlorinated and Recalcitrant Compounds, First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, Calif., May 18-21, 1998: Columbus, Ohio, Battelle Press, p. 321-326.
- Iborra, Montserrat, Izquierdo, J.F., Tejero, Javier, and Cunill, Fidel, 1988, Getting the lead out with ethyl *t*-butyl ether: *Chemtech*, v. 18, no. 2, p. 120-122.
- International Programme of Chemical Safety, 1998, Environmental health criteria 206--Methyl tertiary-butyl ether: Geneva, Switzerland, World Health Organization, 199 p.
- International Technology Corporation, 1988, Treatment system for the reduction of aromatic hydrocarbons and ether concentrations in groundwater: Washington, D.C., Health and Environmental Sciences Department, American Petroleum Institute Publication No. 4471, 95 p.
- Iowa Department of Natural Resources, 2000, Methyl tertiary-butyl ether (MTBE) occurrence in Iowa--A report for the 2000 session of the seventy-eighth general assembly: Des Moines, Iowa, Underground Storage Tank Section, 32 p.
- Jandrasi, F.J., and Masoomian, S.Z., 1995, Minimize process waste during plant design: *Environmental Engineering World*, v. 1, no. 1, p. 6-15.
- Japar, S.M., Wallington, T.J., Richert, J.F.O., and Ball, J.C., 1990a, The atmospheric chemistry of oxygenated fuel additives--*t*-Butyl alcohol and *t*-butyl ether, in Air & Waste Management Association, Annual Meeting & Exhibition, 83rd, Pittsburgh, Pa., June 24-29, 1990, [Proceedings]: v. 6, 15 p.
- Japar, S.M., Wallington, T.J., Richert, J.F.O., and Ball, J.C., 1990b, The atmospheric chemistry of oxygenated fuel additives--*t*-Butyl alcohol, dimethyl ether, and methyl *t*-butyl ether: *International Journal of Chemical Kinetics*, v. 22, no. 12, p. 1257-1269.
- Japar, S.M., Wallington, T.J., Rudy, S.J., and Chang, T.Y., 1991, Ozone-forming potential of a series of oxygenated organic compounds: *Environmental Science & Technology*, v. 25, no. 3, p. 415-420.
- Javanmardian, M., and Glasser, H.A., 1997, In-situ biodegradation of MTBE using biosparging, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 424.

- Jeffrey, David, 1997, Physico-chemical properties of MTBE and predictions of preferred environmental fate and compartmentalization, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 397-399.
- Jensen, H.M., and Arvin, Erik, 1990, Solubility and degradability of the gasoline additive MTBE, methyl *tert*-butyl-ether, and gasoline compounds in water, *in* Arendt, F., Hinsenveld, M., and van den Brink, W.J., eds., Contaminated Soil '90: Netherlands, Kluwer Academic Publishers, p. 445-448.
- Johansen, N.G., 1984, The analysis of C1-C4 alcohols, MTBE, and DIPE in motor gasolines by multi-dimensional capillary column gas chromatography: *Journal of High Resolution Chromatography & Chromatography Communications*, v. 7, no. 8, p. 487-489.
- Johnson, Richard, Pankow, James, Bender, David, Price, Curtis, and Zogorski, John, 2000, MTBE--To what extent will past releases contaminate community water supply wells?: *Environmental Science & Technology*, v. 34, no. 9, p. 2A-9A.
- Johnson, R.L., and Grady, D.E., 1997, Remediation of a fractured clay soil contaminated with gasoline containing MTBE, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 12-14, 1997, Proceedings: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 60-73.
- Johnson, Ted, McCoy, Michael, and Wisbith, Tony, 1994 [1995], A study to characterize air concentrations of methyl tertiary butyl ether (MTBE) at service stations in the Northeast: Washington, D.C., Health and Environmental Sciences Department, American Petroleum Institute Publication No. 4619, 131 p.
- Kanai, Hiromitsu, Inouye, Veronica, Goo, Reginald, Chow, Rendy, Yazawa, Lester, and Maka, Jim, 1994, GC/MS analysis of MTBE, ETBE, and TAME in gasolines: *Analytical Chemistry*, v. 66, no. 6, p. 924-927.
- Karpel Vel Leitner, N., Papailhou, A.L., Croue, J.P., Peyrot, J., and Dore, M., 1994, Oxidation of methyl *tert*-butyl ether (MTBE) and ethyl *tert*-butyl ether (ETBE) by ozone and combined ozone/hydrogen peroxide: *Ozone Science & Engineering*, v. 16, no. 1, p. 41-54.
- Kavanaugh, Mike, and Stocking, Andrew, 1998, Comparative evaluation of air stripping technologies for MTBE treatment, *in* Treatment technologies for removal of methyl tertiary butyl ether (MTBE) from drinking water--Air stripping, advanced oxidation processes (AOP), and granular activated carbon (GAC): Malcom Pirnie Inc., prepared for MTBE Research Partnership, p. 1-1 - 1-60.
- Keller, Arturo, 1999, Health and environmental assessment of MTBE--The California perspective [CD ROM], *in* American Water Works Association Annual Conference, Chicago, Ill., June 20-24, 1999 [Proceedings]: American Water Works Association.
- Keller, A.A., Sirivithayapakorn, Sanya, and Kram, Mark, 1999, Remediation of MTBE-Contaminated water and soil: Remediation, *Journal of Environmental Cleanup costs, Technologies and Techniques*, v. 10, no. 1, p. 55-67.
- Keller, Arturo, Froines, John, Koshland, Catherine, Reuter, John, Irwin, Suffet, and Last, Jerold, 1998, Health and Environmental Assessment of MTBE, Report to the governor and legislature of the State of California as sponsored by SB 521: University of California, UC Toxic Substances Research and Teaching Program, v. 1, Summary & Recommendations, 63 p.
- Kelly, T.J., Callahan, P.J., Plell, Joachim, and Evans, G.F., 1993, Method development and field measurements for polar volatile organic compounds in ambient air: *Environmental Science & Technology*, v. 27, no. 6, p. 1146-1153.

- Kemezis, Paul, 1992, Precursors for MTBE/TAME: Chemical Week, v. 151, no. 1, p. 48.
- Kinal, Rebecca, Murali, Dev, Dramera, Raveendra, and McDermott, Raymond, 1998, Contaminant transport modeling to expedite site closure, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 130-135.
- Kirchstetter, T.W., Singer, B.C., Harley, R.A., Kendall, G.R., and Chan, Waymond, 1996, Impact of oxygenated gasoline use on California light-duty vehicle emissions: Environmental Science & Technology, v. 30, no. 2, p. 661-670.
- Kirschner, Elisabeth, 1993, Alaska, Boston plan no-MTBE winter: Chemical Week, v. 153, no. 12, p. 7.
- Kirschner, E.M., 1995, Production of top 50 chemicals increased substantially in 1994: Chemical & Engineering News, v. 73, no. 15, p. 16-18.
- Kirchstetter, T.W., Singer, B.C., Harley, R.A., Kendall, G.R., and Hesson, J.M., 1999, Impact of California reformulated gasoline on motor vehicle emissions.2. volatile organic compound speciation and reactivity: Environmental Science & Technology, v. 33, no. 2, p. 329-336.
- Klan, M.J., and Carpenter, M.J., 1994, A risk-based drinking water concentration for methyl tertiary butyl ether (MTBE), *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., November 2-4, 1994: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 107-115.
- Koenigsberg, S.S., 1997, A comprehensive evaluation on the use of oxygen release compound in bioremediation, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 12-14, 1997 [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 668-682.
- Koenigsberg, Stephen, Sandefur, Craig, Mahaffey, William, Deshusses, Marc, Fortin, Nathalie, 1999, Peroxygen mediated bioremediation of MTBE, *in* Alleman, B.C., and Leeson, Andrea, eds., In Situ Bioremediation of Petroleum Hydrocarbons and Other Organic Compounds, V. 3, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 13-18.
- Kolpin, D.W., Squillace, P.J., Zogorski, J.S., and Barbash, J.E., 1997, Pesticides and volatile organic compounds in shallow urban groundwater of the United States, *in* Chilton, John and others, eds., Congress on Groundwater in the Urban Environment [Proceedings]: Netherlands, A.A., Balkema, p. 469-474.
- Komex H2O Science, 1997, Draft investigation report--MTBE contamination--City of Santa Monica Charnock well field, Los Angeles, California: Huntington Beach, Calif., Komex H2O Science, 60 p.
- Kram, Mark, and Lory, Ernest, 1998, Use of SCAPs suite of tools to rapidly delineate a large MTBE plume, *in* Bell, R.S., Powers, M.H., and Larson, T., Symposium of the Application of Geophysics to Environmental and Engineering Problems [Proceedings]: Mar. 22-26, 1998, Chicago, p. 85-99.
- Kramer, W.H., 1998, Evaluation of subsurface utilities and indoor air environments as migration pathways and points of exposure in RBCA site assessment, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association, and American Petroleum Institute, p. 267-298.

- Kuhn, Jeff, 1998, Aesthetic criteria for drinking water contaminated with MTBE--The angst factor: *Lustline, Bulletin* 29, p. 14-16.
- Lacy, M.J., Robbins, G.A., Wang, Suyu, and Stuart, J.D., 1995, Use of sequential purging with the static headspace method to quantify gasoline contamination: *Journal of Hazardous Materials*, v. 43, no. 1-2, p. 31-44.
- Lahvis, M.A., and Baehr, A.L., 1998, Simulating transport of volatile organic compounds in the unsaturated zone using the computer model R-UNSAT: U.S. Geological Survey Fact Sheet, FS-019-98, 4 p.
- Lahvis, M.A., and Rehmann, L.C., 1999, Simulation of methyl *tert*-butyl ether (MTBE) transport to ground water from immobile sources of gasoline in the vadose zone, in Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation*, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p., 247-259.
- Lahvis, M.A., Baker, R.J., and Baehr, A.L., 1999, Transport of methyl *tert*-butyl ether (MTBE) and hydrocarbons to ground water from gasoline spills in the unsaturated zone, in Morganwalp, D.W., and Buxton, H. T., eds., U.S. Geological Survey Toxics Hydrology Program--Technical Meeting, Volume 3, Subsurface Contamination from Point Sources, Charleston, S.C., Mar. 8-12, 1999 [Proceedings]: U.S. Geological Survey Water Resources Investigations Report, WRIR 99-4018C, p. 113-120.
- Lahvis, M.A., Baker, R.J., and Baehr, A.L., 1999, Mass transport of methyl *tert*-butyl ether (MTBE) across the water table and significance for natural-attenuation remediation at a gasoline-spill site in Beaufort, S.C., in Morganwalp, D.W., and Buxton, H.T., eds., U.S. Geological Survey Toxics Hydrology Program--Technical Meeting, Volume 3, Subsurface Contamination from Point Sources Charleston, S.C., Mar. 8-12, 1999 [Proceedings]: U.S. Geological Survey Water Resources Investigations Report, WRIR 99-4018C, p. 75-86.
- Landmeyer, J.E., Chapelle, F.H., and Bradley, P.M., 1996, Assessment of intrinsic bioremediation of gasoline contamination in the shallow aquifer, Laurel Bay Exchange, Marine Corps Air Station, Beaufort, South Carolina: U.S. Geological Survey Water-Resources Investigations Report 96-4026, 50 p.
- Landmeyer, J.E., Pankow, J.F., and Church, C.D., 1997, Occurrence of MTBE and *tert*-butyl alcohol in a gasoline-contaminated aquifer, in American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 413-415.
- Landmeyer, J.E., Chapelle, F.H., Bradley, P.M., Pankow, J.F., Church, C.D., and Tratnyek, P.G., 1998, Fate of MTBE relative to benzene in a gasoline-contaminated aquifer (1993-98): *Ground Water Monitoring & Remediation*, Fall, p.93-102.
- Landmeyer, J.E., Bradley, P.M., and Chapelle, F.H., 1999, Fate of MTBE relative to benzene in a gasoline-contaminated aquifer, in Morganwalp, D.W., and Buxton, H.T., eds., U.S. Geological Survey Toxic Substances Hydrology Program--Technical Meeting, Volume 3, Subsurface Contamination from Point Sources, Charleston, S.C., Mar. 8-12, 1999 [Proceedings]: U.S. Geological Survey, Water-Resources Investigations Report, WRIR 99-4018C, p. 59-74.
- Lawuyi, Richard, and Fingas, Merv, 1997, Environmental impact of methyl *tert*-butyl ether (MTBE), in Technical Seminar of Chemical Spills, 14th, [Proceedings]: Ottawa, Ontario, Environment Canada, p. 127-141.
- Lee, A.K.K., and Al-Jarallah, Adnan, 1986, MTBE production technologies and economics: *Chemical Economy & Engineering Review*, v. 18, no. 9, p. 25-34.

- Levy, J.M., and Yancey, J.A., 1986, Dual capillary gas chromatographic analysis of alcohols and methyl *tert*-butyl ether in gasolines: *Journal of High Resolution Chromatography & Chromatography Communications*, v. 9, no. 7, p. 383-387.
- Liang, Sun, Yates, R.S., Palencia, L.S., and Bruno, J.M., 1999, Oxidation of methyl tertiary-butyl ether (MTBE) by ozone and peroxone and identification of by-products [CD ROM], *in* American Water Works Association Annual Conference, Chicago, Ill., June 20-24, 1999 [Proceedings]: American Water Works Association.
- Lindsey, B.D., Breen, K.J., and Daly, M.H., 1997, MTBE in water from fractured-bedrock aquifers, southcentral Pennsylvania, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 399-400.
- Lindstrom, A.B., and Pleil, J.D., 1996, Alveolar breath sampling and analysis to exposures to methyl tertiary butyl ether (MTBE) during motor vehicle refueling: *Journal of Air & Waste Management*, v. 46, no. 7, p. 676-682.
- Lioy, P.J., Weisel, C.P., Jo, Wan-Kuen, Pellizzari, Edo, and Raymer, J.H., 1994, Microenvironmental and personal measurements of methyl-tertiary butyl ether (MTBE) associated with automobile use activities: *Journal of Exposure Analysis and Environmental Epidemiology*, v. 4, no. 4, p. 427-441.
- Long, G., Meek, M.E., and Savard, S., 1994, Methyl tertiary-butyl ether--Evaluation of risks to health from environmental exposure in Canada: *Journal of Environmental Science and Health*, v. C12, no. 2, p. 389-395.
- Lopes, T.J., and Bender, D.A., 1998, Nonpoint sources of volatile organic compounds in urban areas, *in* Source Water Assessment and Protection--A Technical Conference, Dallas, Tex., April 28-30 [Proceedings]: Fountain Valley, Calif., National Water Institute, p. 199-200.
- Lopes, T.J., and Bender, D.A., 1998, Nonpoint sources of volatile organic compounds in urban areas--Relative importance of urban land surfaces and air: *Environmental Pollution*. v. 101, p. 221-230.
- Love, J.T., Delzer, G.C., Abney, S.R., and Zogorski, J.S., 1998, Study design and analytical results used to evaluate stability of volatile organic compounds in water matrices: U.S. Geological Survey Open-File Report, OFR 98-637, 156 p.
- Lucas, Allison, 1994, Health concerns fuel EPA study of ETBE and TAME: *Chemical Week*, v. 154, no. 18, p. 10.
- Lucier, George, Genter, Mary Beth, Lao, Y.J., Stopford, Woodhall, and Starr, Tom, 1995, Summary of the carcinogenicity assessment of MTBE conducted by the Secretary's Scientific Advisory Board on Toxic Air Pollutants: *Environmental Health Perspectives*, v. 103, no. 5, p. 420-422.
- Luhrs, R.C., and Pyott, C.J., 1992, Trilinear plots a powerful new application for mapping gasoline contamination, *in* Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Restoration, 1992, [Proceedings]: Dublin, Ohio, National Ground Water Association, p. 85-100.
- Lyons, C.E., 1993, Quantifying the emissions reduction effectiveness and costs of oxygenated gasoline, *in* Air & Waste Management Association, Annual Meeting & Exhibition, 86th, Denver, Colo., June 13-18, 1993, [Proceedings]: AWMA.
- Lyons, C.E., and Fox, R.J., 1993, Quantifying the air pollution emissions reduction effectiveness and costs of oxygenated fuels, *in* Society of Automotive Engineering, ed., New developments in alternative fuels and gasolines for SI and CI engines [Spec. Pub.]: SAE, SP-958, p. 61-75.

- Mace, R.E., and Choi, Wan-Joo, 1998, The size and behavior of MTBE plumes in Texas, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 1-11.
- Mace, R.E., Fisher, R.S., Welch, D.M., and Parra, S.P., 1997, Extent, mass, and duration of hydrocarbon plumes from leaking petroleum storage tank sites in Texas: University of Texas, Austin, Bureau of Economic Geology, circular 97-1, 51 p.
- Mackay, Donald, Shiu, W.Y., and Ma, K.C., 1993, Illustrated handbook of physical-chemical properties and environmental fate for organic chemicals--Volume III--Volatile organic chemicals: Ann Arbor, Mich., Lewis Publishers, Inc., p. 756.
- Mackay, D.M., Einarson, M.D., Wilson, R.D., Fowler, Bill, Scow, Kate, Hyman, Mike, Nass, Claudia, Schirmer, Mario, and Durrant, G.C., 1999, Field studies of *in situ* remediation of an MTBE plume at Site 60, Vandenberg Air Force Base, California, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 178-188.
- Majima, Tetsuro, Ishii, Tadahiro, and Arai, Shigeyoshi, 1989, The IR photochemistry of organic compounds. II. The IR photochemistry of ethers--The decomposition patterns: Bulletin of the Chemical Society of Japan, v. 62, no. 6, p. 1701-1709.
- Maine MTBE Drinking Water Study, 1998, The presence of MTBE and other gasoline compounds in Maine's drinking water--Preliminary report: Bureau of Health, Department of Human Services, Bureau of Waste Management & Remediation, Department of Environmental Protection, Maine Geological Survey, and Department of Conservation, 23 p.
- Malcom Pirnie, Inc., 1998, Evaluation of the fate and transport of ethanol in the environment: Prepared for American Methanol Institute, Oakland, Calif., Malcome Pirnie, Inc., 58 p.
- Malley, J.P., Jr., Eliason, P.A., and Wagler, J.L., 1993, Point-of-entry treatment of petroleum contaminated water supplies: Water Environment Research, v. 65, no. 2, p. 119-128.
- Mancini, E.R., 1997, Aquatic toxicity data for methyl tertiary-butyl ether (MTBE)--Current status, future research, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 427-429.
- Mancini, E.R., 1997, Physiochemical and ecotoxicological properties of gasoline oxygenates [abs.]: Bridging the Global Environment--Technology, Communication, and Education, Society of Environmental Toxicology and Chemistry Annual Meeting Abstract Book, 18th, San Francisco, Calif. Nov. 16-20, 1997: Washington, D.C., SETAC, p. 251.
- Mancini, E.R., Stubblefield, W.A., and Tillquist, H., 1998, Important ecological risk assessment parameters for MTBE and other gasoline oxygenates, *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 63-66.
- Mannino, D.M., Schreiber, Judith, Aldous, Kenneth, Ashley, David, Moolenaar, Ronald, and Almaguer, Daniel, 1995, Human exposure to volatile organic compounds--A comparison of organic vapor monitoring badge levels with blood levels: International Archives of Occupational Environmental Health, v. 67, no. 1, p. 59-64.

- Mannino, D.M., and Etzel, R.A., 1996, Are oxygenated fuels effective? An evaluation of ambient carbon monoxide concentrations in 11 western states, 1986 to 1992: *Journal of the Air & Waste Management Association*, v. 46, no. 1, p. 20-24.
- Marston, C.R., 1994, Improve etherification plant efficiency and safety: *Fuel Reformulation*, v. 4, no. 4, p. 42-46.
- McCabe, L.J., 1992 [1993], Initial results from the auto/oil air quality improvement research program, *in* Strauss, K.H. and Dukek, W.G., eds., *The impact of U.S. environmental regulations on fuel quality*: Philadelphia, Pa., American Society for Testing and Materials, p. 63-83.
- McCarthy, J.E., and Tiemann, Mary, 1998, MTBE in Gasoline--Clean Air and drinking water issues: Congressional Research Service, Environment and Natural Resources Policy Division, 98-200 ENR, 10 p.
- McKinnon, R.J., and Dyksen, J.E., 1984, Removing organics from groundwater through aeration plus GAC: *Journal of the American Water Works Association*, v. 76, no. 5, p. 42-47.
- McMahon, P.B., Crowfoot, R., and Wydoski, D., 1995, Effect of fuel oxidants on the degradation of gasoline components in aquifer sediments [abs.], *in* Poster abstracts, situ and on-site bioreclamation--The third international symposium, April 24-27, 1995, San Diego, Calif.: Battelle, p. D7.
- McMahon, P.B., and Bruce, B.W., 1997, Distribution of terminal electron-accepting processes in an aquifer having multiple contaminant sources: *Applied Geochemistry*, v. 12, no. 4, p. 507-516.
- McNair, Laurie, Russell, Armistead, and Odman, M.T., 1992, Airshed calculation of the sensitivity of pollutant formation to organic compound classes and oxygenates associated with alternative fuels: *Journal of the Air Waste Mangement Association*, v. 42, no. 2, p. 174-178.
- Mehlman, M.A., 1990, Dangerous properties of petroleum-refining products--Carcinogenicity of motor fuels (gasoline): *Teratogenesis, Carcinogenesis, and Mutagenesis*, v. 10, no. 5, p. 399-408.
- Mehlman, M.A., 1995, Dangerous and cancer-causing properties of products and chemicals in the oil refining and petrochemical industry, Part XV. Health hazards and health risks from oxygenated automobile fuels (MTBE)--Lessons not heeded: *International Journal of Occupational Medicine and Toxicology*, v. 4, no. 2, p. 17.
- Mehlman, M.A., 1996, Collegium Ramazzini position on oxygenated and reformulated gasoline: *International Journal of Occupational Medicine, Immunology, and Toxicology*, v. 5, no. 1, p. 1-2.
- Mehlman, M.A., 1998, Human health effects from exposure to gasoline containing methyl-tertiary-butyl ether: *European Journal of Oncology*, v. 3, no. 3, p. 171-189.
- Mennear, J.H., 1995, MTBE--Not carcinogenic: *Environmental Health Perspectives*, v. 103, no. 11, p. 985-986.
- Meylan, W.M., Howard, P.H., Boethling, R.S., Aronson, Dallas, Printup, Heather, and Gouchie, Sybil, 1999, Improved method for estimating bioconcentration/bioaccumulation factor from octanol/water partition coefficient: *Environmental Toxicology and Chemistry*, v. 18, no. 4, p. 664-672.
- Mihelcic, J.R., 1990, Modeling the potential effect of additives on enhancing the solubility of aromatic solutes contained in gasoline: *Ground Water Monitoring & Remediaton*, v. 10, no. 3, p. 132-137.

- Miller, M.E., and Stuart, J.D., 2000, Measurement of aqueous Henry's Law Constants for oxygenates and aromatics found in gasolines by the static headspace method: *Analytical Chemistry*, v. 72, no. 3, p. 622-625.
- Mo, K., Lora, C.O., Wanken, A., and Kulpa, C.F., 1995, Biodegradation of methyl-*t*-butyl ether by pure bacterial cultures [abs.], in Abstracts of the 95th general meeting of the American Society for Microbiology: American Society for Microbiology, v. 95, p. 408.
- Mohr, S.N., Fiedler, Nancy, Weisel, Clifford, and Kelly-McNeil, Kathie, 1994, Health effects of MTBE among New Jersey garage workers: *Inhalation Toxicology*, v. 6, no. 6, p. 553-562.
- Moolenaar, R.L., Hefflin, B.J., Ashley, D.L., Middaugh, J.P., and Etzel, R.A., 1994, Methyl tertiary butyl ether in human blood after exposure to oxygenated fuel in Fairbanks, Alaska: *Archives of Environmental Health*, v. 49, no. 5, p. 402-409.
- Mormile, M.R., Liu, Shi, and Suflita, J.M., 1994, Anaerobic biodegradation of gasoline oxygenates--Extrapolation of information to multiple sites and redox conditons: *Environmental Science & Technology*, v. 28, no. 9, p. 1727-1732.
- Moran, M.J., Zogorski, J.S., and Squillace, P.J., MTBE in ground water of the United States--Occurrence, potential sources, and long-range transport [CD ROM], in Water Resources Conference, American Water Works Association, Norfolk, Va., Sept. 26-29, 1999 [Proceedings]: American Water Works Association.
- Moran, M.J., Clawges, R.M., and Zogorski, J.S., 2000, Identifying the usage patterns of methyl *tert*-butyl ether (MTBE) and other oxygenates in gasoline using gasoline surveys [abs], in American Chemical Society Division of Environmental Chemistry, San Francisco, Calif., March 26-30, 2000: American Chemical Society, v. 40, no. 1, p. 209-212.
- Moran, M.J., Halde, M.J., Clawges, R.M., and Zogorski, J.S., 2000, Relations between the detection of methyl *tert*-butyl ether (MTBE) in surface and ground water and its content in gasoline [abs], in American Chemical Society Division of Environmental Chemistry, San Francisco, Calif., March 26-30, 2000: American Chemical Society, v. 40, no. 1, p. 195.
- Mormile, M.R., and Suflita, J.M., 1996, The toxicity of selected gasoline components to glucose methanogenesis by aquifer microorganisms: *Anaerobe*, v. 2, p. 299-303.
- Mosteller, D.C., Reardon, K.F., Bourquin, A.W., Desilets, B., Dumont, D., Hines, R., and Kilkenny, S., 1997, Biotreatment of MTBE-contaminated ground water, in American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 420-421.
- MTBE Research Partnership, 1998, Treatment technologies for removal of methyl tertiary butyl ether (MTBE) from drinking water--Air stripping, advanced oxidation process (AOP), and granular activated carbon (GAC): Sacramento, Calif., Executive Summary, Western States Petroleum Association, Association of California Water Agencies, and Oxygenated Fuels Association, 27 p.
- Munoz, Rosa, Cruz Burguet, M., Martinez-Soria, V., and Nogueira de Araujo, Renata, 2000, Densities, refractive indices, and derived excess properties of *tert*-butyl alcohol, methyl *tert*-butyl ether and 2-methylpentane binary and ternary systems at 303.15 K: *Fluid Phase Equilibria*, v. 167, p. 99-111.
- Nakamura, D.N., 1993, Is MTBE losing its popularity?: *Hydrocarbon Processing*, v. 72, no. 9, p. 19.

- National Science and Technology Council Committee on Environment and Natural Resources, 1996, Interagency assessment of potential health risks associated with oxygenated gasoline: Interagency Oxygenated Fuels Assessment Steering Committee, Office of the President, 84 p.
- National Technical Information Service, 1992, Methyl tertiary-butyl ether, *in* Government reports announcements & index, no. 15: NTIS, 57 p.
- NATLSCO, A Division of KRMS, 1995, Service station personnel exposures to oxygenated fuel components--1994: Washington, D.C., Health and Environmental Sciences Department, American Petroleum Institute Publication No. 4625, 71 p.
- Newman, Alan, 1995, MTBE detected in survey of urban groundwater: *Environmental Science & Technology*, v. 29, no. 7, p. 305A.
- New York, 1993, Fact Sheet--Village of Liberty water supply system: Department of Health, State of New York, 3 p.
- Nichols, E.M., Einarson, M.D., and Beadle, S.C., 1999, New technical guidance for MTBE site characterization, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation*, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 348-353.
- Nihlen, Annsofi, Lof, Agneta, and Johanson, Gunnar, 1995, Liquid/air partition coefficients of methyl and ethyl *t*-butyl ethers, *t*-amyl methyl ether, and *t*-butyl alcohol: *Journal of Exposure Analysis and Environmental Epidemiology*, v. 5, no. 4, p. 573-582.
- Nihlen, Annsofi, Sumner, S.C.J., Lof, Agneta, and Johanson, Gunnar, 1999, C2-Labeled methyl *tert*-butyl ether--Toxicokinetics and characterization of urinary metabolites in humans: *Chemical Research Toxicology*, v. 12, p. 822-830.
- Nocca, Jean-Luc, Forestiere, Alain, and Cosyns, Jean, 1994, Diversity process strategies for reformulated gasoline: *Fuel Reformulation*, v. 4, no. 5, p. 18-22.
- Novak, J.T., Yeh, Carol, Gullic, David, Eichenberger, John, and Benoit, R.E., 1992, The influence of microbial ecology on subsurface degradation of petroleum contaminants: Blacksburg, VA, Virginia Polytechnic Institute and State University, VPI-VWRRC-BULL 177, 76 p.
- O'Brien, A.K., Reiser, R.G., and Gylling, Helle, 1997, Spatial variability of volatile organic compounds in streams on Long Island, New York and in New Jersey: U.S. Geological Survey Fact Sheet FS-194-97, 6 p.
- Odencrantz, J.E., 1998, Implications of MTBE for intrinsic remediation of underground fuel tank sites, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference*, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association, and American Petroleum Institute, p. 571-579.
- Odencrantz, J.E., 1999, Extensive database from over 500 sites and three years allows examination and interpretation of groundwater MTBE plumes in Southern California, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation*, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p., 367-372.
- Office of Science and Technology Policy, 1995, Interagency assessment of oxygenated fuels: Washington, D.C., OSTP, The Executive Office of the President, p. 258.

- Oil & Gas Journal, 1994, Sabic sees big growth for MTBE: Oil & Gas Journal, v. 92, no. 48, p. 30-31.
- Oil & Gas Journal, 1995, USGS reports MTBE in groundwater: Oil & Gas Journal, v. 93, no. 16, p. 21-22.
- Oil & Gas Journal, 1996, U.S. gasoline plagued by economic, technical uncertainty: Oil & Gas Journal, v. 94, no. 2, p. 29-33.
- Oil & Gas Journal, 1999, Panel urges less MTBE use in gasoline: Oil & Gas Journal, v. 97, no. 31, p. 35.
- Oktar, Nuray, Murtezaoglu, Kirali, Dogu, Timur, and Dogu, Gulsen, 1999, Dynamic analysis of adsorption equilibrium and rate parameters of reactants and products in MTBE, ETBE and TAME production: The Canadian Journal of Chemical Engineering, v. 77, p. 406-412.
- Oxygenated Fuels Association, 1995, MTBE in ground water--Fact sheet for local health and water authorities: Oxygenated Fuels Association, 7 p.
- Oxygenated Fuels Association, 1996, Gasoline reformulated with methyl tertiary butyl ether (MTBE)--Public health issues and answers: Arlington, Va., Oxygenated Fuels Association, 59 p.
- Oxygenated Fuels Association, 1998, Modeling the volatilization of methyl tertiary-butyl ether (MTBE) from surface impoundments: Arlington, Va., Oxygenated Fuels Association, 44 p.
- Oxygenated Fuels Association, 1998, Taste and odor properties of methyl tertiary-butyl ether and implications for setting secondary maximum contaminant level: Arlington, Va., Oxygenated Fuels Association, 46 p.
- Page, N.P., 1989, Gasoline leaking from underground storage tanks--Impact on drinking water quality, in Hemphill, D.D., ed., Trace substances in environmental health XXII: Columbia, University of Missouri, p. 233-245.
- Palassis, John, Hartle, R.W., and Holtz, J.L., 1993, A method for determination of methyl *tert*-butyl ether in gasoline vapors and liquid gasoline samples: Applied Occupational Environmental Hygiene, v. 8, no. 11, p. 964-969.
- Pankow, J.F., Rathburn, R.E., and Zogorski, J.S., 1996, Calculated volatilization rates of fuel oxygenate compounds and other gasoline-related compounds from rivers and streams--A comparison with other gasoline-related compounds: Chemosphere, v. 33, no. 5, p. 921-937.
- Pankow, J.F., Thomson, N.R., and Johnson, R.L., 1996, Modeling the atmospheric inputs of MTBE to groundwater systems [abs.], in Society of Environmental Toxicology and Chemistry abstract book, 17th, Washington, D.C., November 17-21, 1996: Washington, D.C., SETAC, p. 115.
- Pankow, J.F., Thomson, N.R., Johnson, R.L., Baehr, A.L., and Zogorski, J.S., 1997, The urban atmosphere as a non-point source for the transport of MTBE and other volatile organic compounds (VOCs) to shallow groundwater, in American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 385-387.
- Pankow, J.F., Thomson, N.R., Johnson, R.L., Baehr, A.L., and Zogorski, J.S., 1997, The urban atmosphere as a non-point source for the transport of MTBE and other volatile organic compounds (VOCs) to shallow groundwater: Environmental Science & Technology, v. 31, no. 10, p. 2821-2828.
- Pankow, J.F., Luo, Wentai, Isabelle, L.M., Bender, D.A., and Baker, R.A., 1998, Determination of a wide range of volatile organic compounds in ambient air using multisorbent adsorption/thermal desorption and gas chromatography/mass spectrometry: Analytical Chemistry, v. 70, no. 24, p. 5213-5211.

- Park, Keeyong, and Cowan, R.M., 1997, Effects of oxygen and temperature on the biodegradation of MTBE, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 421-424.
- Parkinson, Gerald, 1999, All sides pumped up for MTBE ban: Chemical Engineering, v. 106, no. 6, p. 49.
- Patterson, G.J., 1998, Potential claims for water purveyors impacted by MTBE or perchlorate, *in* The Southwest Focused Ground Water conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 78-85.
- Paulov, Stefan, 1987, Action of the anti-detonation preparation *tert*-butyl methyl ether on the model species *Rana temporaria* L.: Biologia, v. 42, no. 2, p. 185-189 [Abs. in English.].
- Pauls, R.E., 1985, Determination of high octane components--Methyl *t*-butyl ether, benzene, toluene, and ethanol in gasoline by liquid chromatography: Journal of Chromatographic Science, v. 23, no. 10, p. 437-441.
- Pavne, R.E., Novick, N.J., and Gallagher, M.N., 1997, Demonstrating intrinsic bioremediation of MTBE and BTEX in ground water at a service station site, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 418-419.
- Peaff, George, 1994, Court ruling spurs continued debate over gasoline oxygenates: Chemical & Engineering News, v. 72, no. 39, p. 8-13.
- Peargin, T.R., 1999, An empirical study of MTBE, benzene, and xylene groundwater remediation rates, *in* Alleman, B.C., and Leeson, Andrea, eds., In Situ Bioremediation of Petroleum Hydrocarbons and Other Organic Compounds, V. 3, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 19-24.
- Pearson, Gary, and Oudijk, Gil, 1993, Investigation and remediation of petroleum product releases from residential storage tanks: Ground Water Monitoring Review, v. 13, no. 3, p. 124-128.
- Peargin, T.R., 1998, An empirical study of MTBE, benzene, and xylene groundwater remediation rates, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association, and American Petroleum Institute, p. 551-559.
- Petroleum Review, 2000, MTBE--How should Europe respond?: The institute of Petroleum, v. 54, no. 637, p. 37-38.
- Piel, W.J., 1995, MTBE use and possible occurrences in water supplies: ARCO Chemical Company, May 10, 4 p.
- Pimentel, A.S., and Arbilla, Graciela, 1998, Kinetic analysis of the gas-phase of methyl *tert*-butyl ether with the OH radical in the presence of NO_x: Journal of the Brazilian Chemical Society, v. 9, no. 6, p. 539-550.
- Poore, Michael, Chang, Ben, Niyati, Ferri, and Madden, Steven, 1997, Sampling and analysis of methyl *t*-butyl ether in ambient air at selected locations in California, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 407.
- Post, Gloria, 1994, Methyl tertiary butyl ether health-based maximum contaminant level support document, *in* New Jersey Drinking Water Quality Institute, Maximum contaminant level recommendations for

hazardous contaminants in drinking water--Appendix A--Health-based maximum contaminant level support documents and addenda: Trenton, N.J., Division of Science and Research, New Jersey Department of Environmental Protection, July [September 26], 16 p.

Poulsen, Mette, Lemon, Lloyd, and Barker, J.F., 1992, Dissolution of monoaromatic hydrocarbons into groundwater from gasoline-oxygenate mixtures: *Environmental Science & Technology*, v. 26, no. 12, p. 2483-2489.

Prager, J.C., ed., 1992, Methyl *tert*-butyl ether, in *Dangerous properties of industrial materials report*: v. 12, no. 3, p. 381-394.

Prah, J.D., Goldstein, G.M., Devlin, R., Otto, D., Ashley, D., House, D., Cohen, K.L., and Gerrity, T., 1994, Sensory, symptomatic, inflammatory, and ocular responses to and the metabolism of methyl tertiary butyl ether in a controlled human exposure experiment: *Inhalation Toxicology*, v. 6, no. 6, p. 521-538.

Price, Joyce, 1995, Gas is greener, but smog safer: *Insight*, v. 11, no. 16, p. 27.

Quigley, C.J., Allen, D.T., and Corsi, R.L., 1997, Release of MTBE and other reformulated gasoline vapor constituents during vehicle refueling and storage tank loading, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 384-385.

Raese, J.W., Sandstrom, M.W., and Rose, D.L., 1995, U.S. Geological Survey laboratory method for MTBE and other fuel additives: U.S. Geological Survey Fact Sheet FS-219-95, 4 p.

Rathbun, R.E., 1998, Transport, behavior, and fate of volatile organic compounds in streams: U.S. Geological Survey Professional Paper 1589, 151 p.

Raynolds, M.A., Checkel, D.M., and Fraser, R.A., 1998, Life cycle value assessment (LCVA) comparison of conventional gasoline and reformulated gasoline: Society of Automotive Engineers, Inc., SAE Technical Paper Series no. 98048, p.111-130.

Reid, J.B., Reisinger, H.J., II, Bartholomae, P.G., Gray, J.C., and Hullman, A.S., 1999, A comparative assessment of the long-term behavior of MtBE and benzene plumes in Florida, USA, *in* Alleman, B.C., and Leeson, Andrea, eds., *Natural Attenuation of Chlorinated Solvents, Petroleum Hydrocarbons, and Other Organic Compounds*, V. 1, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 97-102.

Reichhardt, Tony, 1995, A new formula for fighting urban ozone: *Environmental Science & Technology*, v. 29, no. 1, p. 36A-41A.

Reisch, M.S., 1994, Top 50 chemicals production rose modestly last year: *Chemical & Engineering News*, v. 72, no. 15, p. 12-16.

Reiser, R.G., and O'Brien, A.K., 1998, Occurrence and seasonal variability of volatile organic compounds in seven New Jersey streams: U.S. Geological Survey, Water-Resources Investigations Report, WRIR 98-4074, 11 p.

Reuber, E.J., 1999, Shallow ground-water quality in the Coastal Plain of Columbia, South Carolina: U.S. Geological Survey Fact Sheet, FS-130-98, 6 p.

Reuter, J.E., Allen, B.C., Richards, R.C., Pankow, J.F., Goldman, C.R., Sholl, R.L., and Seyfried, J.S., 1998, Concentrations, sources, and fate of the gasoline oxygenate methyl *tert*-butyl ether (MTBE) in a multiple-use lake: *Environmental Science & Technology*, v. 32, no. 23, p. 3666-3672.

- Rhodes, Anne, 1999, California plans to ban MTBE from gasoline: Oil & Gas Journal, v. 97, no. 14, p. 39.
- Rixey, W.G., 1994, The effect of oxygenated fuels on the mobility of gasoline components in groundwater, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., November 2-4, 1994, [Proceedings]: Houston, Tex., National Water Well Association and American Petroleum Institute, p. 75-90.
- Rixey, W.G., and Joshi, Sushrut, 1999, Dissolution characteristics of MTBE, BTEX and 1,2,4-trimethylbenzene from a residually trapped gasoline source, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 107-122.
- Robbins, G.A., Wang, Suyu, and Stuart, J.D., 1993, Using the static headspace method to determine Henry's Law constants: Analytical Chemistry, v. 65, no. 21, p. 3113-3118.
- Robbins, G.A., Henebry, B.J., Schmitt, B.M., Bartolomeo, F.B., Green, Aaron, and Zack, Peter, 1999, Evidence for MTBE in heating oil: Ground Water and Remediation, Spring, p. 65-68.
- Robinson, M., Bruner, R.H., and Olson, G.R., 1990, Fourteen- and ninety-day oral toxicity studies of methyl tertiary-butyl ether in Sprague-Dawley rats: Journal of the American College of Toxicology, v. 9, no. 5, p. 525-540.
- Rodriguez, Rey, 1997, MTBE--Clean water vs. clean air: Ontario, Canada, Association of California Water Agencies, March 13, 200 p.
- Rose, D.L., Connor, B.F., Abney, S.R., and Raese, J.W., Laboratory Method for analysis of small concentrations of methyl *tert*-butyl ether and other ether gasoline oxygenates in water: U.S. Geological Survey Fact Sheet, FS-086-98, 6 p.
- Rong, Yue, 1998, Groundwater data analysis for methyl tertiary butyl ether in Los Angeles County and Ventura County, *in* Annual Forum, Sacramento, Calif., Sept. 19-23, 1998: Sacramento, Ground Water Protection Council, p. 81-90.
- Rong, Yue, 1999, Groundwater data analysis for methyl tertiary butyl ether: Environmental Geosciences, v. 6, no. 2, p. 76-81.
- Rosenkranz, H.S., and Klopman, Gilles, 1991, Predictions of the lack of genotoxicity and carcinogenicity in rodents of two gasoline additives--Methyl- and ethyl-*t*-butyl ethers: In Vitro Toxicology, v. 4, no. 1, p. 49-50.
- Rotman, David, 1993, Effects of oxygenated fuels are questioned at ACS meeting: Chemical Week, v. 152, no. 13, p. 9.
- Rowe, B.L., Landrigan, S.J., and Lopes, T.J., 1997, Summary of published aquatic toxicity information and water-quality criteria for selected volatile organic compounds: U.S. Geological Survey Open File Report OFR 97-563, 60 p.
- Salanitro, J.P., Wisniewski, H.L., and Dortch, I.J., 1992, Effects of dissolved oxygen on biodegradation of gasoline components in saturated soil columns [abs.], *in* Abstracts of the 92nd general meeting of the American Society for Microbiology: American Society for Microbiology, v. 92, p. 354.
- Salanitro, J., Wisniewski, H., and McAllister, P., 1996, Observation on the biodegradation and bioremediation potential of methyl *t*-butyl ether [abs.], *in* Society of Environmental Toxicology and

Chemistry abstract book, 17th, Washington, D.C., November 17-21, 1996: Washington, D.C., SETAC, p. 115.

Salanitro, J.P., Diaz, L.A., Williams, M.P., Wisniewski, H.W., 1994, Isolation of a bacterial culture that degrades methyl *t*-butyl ether: *Applied and Environmental Microbiology*, v. 60, no. 7, p. 2593-2596.

Salanitro, J.P., Chou, Chi-Su, Wisniewski, H.L., and Vipond, T.E., 1998, Perspectives on MTBE biodegradation and the potential for in situ aquifer bioremediation, *in* The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998, [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 40-54.

Salanitro, J.P., Spinnler, G.E., Neaville, C.C., Maner, P.M., Stearns, S.M., Johnson, P.C., and Bruce, C., 1999, Demonstration of the enhanced MTBE bioremediation (EMB) in situ process, *in* Alleman, B.C., and Leeson, Andrea, eds., *In Situ Bioremediation of Petroleum Hydrocarbons and Other Organic Compounds*, V. 3, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 37-46.

Savolainen, H., Pfaffli, Pirkko, and Elovaara, Eivor, 1985, Biochemical effects of methyl tertiary-butyl ether in extended vapour exposure of rats: *Archives of Toxicology*, v. 57, no. 4, p. 285-288.

Scharfenaker, Mark, 2000, MTBE takes spotlight on show: Maine Stream, *American Water Works Association*, v. 44, no. 2, p. 1-2.

Schifter, Isaac, Diaz, Luis, Avalos, Sergio, Vera, Mario, Barrera, Adrian, and Lopez-Salinas, Esteban, 2000, Effect of methyl tertiary butyl ether concentrations on exhaust emissions from gasoline used in the metropolitan area of Mexico City: *Journal of the Air & Waste Management Association*, v. 50, no. 4, p. 488-494.

Schirmer, Mario, Barker, J.F., Hubbard, C.E., Church, C.D., Pankow, J.F., and Tratnyek, P.G., 1997, The Borden field experiment--Where has the MTBE gone?, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 415-417.

Schirmer, Mario, and Barker, J.F., 1998, A study of long-term MTBE attenuation in the Borden Aquifer, Ontario, Canada: *Ground Water Monitoring & Remediation*, Spring, p. 113-122.

Schirmer, Mario, Barker, J.F., Butler, B.J., Church, C.D., and Schirmer, Kristin, 1998, Natural attenuation of MTBE at the Borden Field Site, *in* Wickramanayake, G.B., and Hinchee, R.E., eds., *Physical, Chemical and Thermal Technologies--Remediation of Chlorinated and Recalcitrant Compounds*, First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, Calif., May 18-21, 1998: Columbus, Ohio, Battelle Press, p. 327-331.

Schirmer, Mario, Butler, B.J., Barker, J.F., Church, C.D., and Schirmer, K., 1999, Evaluation of biodegradation and dispersion as natural attenuation processes of MTBE and benzene at the Borden Field site: *Physics and Chemistry of the Earth*, v. 24, no. 6, p. 557-560.

Schorr, Paul, 1994, Appendix E--Occurrence, treatability and estimated statewide costs to achieve a proposed maximum contaminant level of 70 ppb for methyl tertiary butyl ether in public and nonpublic drinking water systems in New Jersey: Bureau of Safe Drinking Water, New Jersey Department of Environmental Protection, 33 p.

Schroll, R., Bierling, B., Cao, G., Doerfler, U., Lahaniati, M., Langenbach, T., Scheunert, I., and Winkler, R., 1994, Uptake pathways of organic chemicals from soil by agricultural plants: *Chemosphere*, v. 28, no. 2, p. 297-303.

- Searle, D.H., 1995, Reformulated gasoline--It's supposed to be good for us: Motorcycle Consumer News, Sept., p. 32-35.
- Seunram, R.D., Lovas, F.J., Pereyra, W., Fraser, G.T., and Hight Walker, A.R., 1997, Rotational spectra, structure, and electric dipole moments of methyl and ethyl *tert*-butyl ether (MTBE and ETBE): Journal of Molecular Spectroscopy, v. 181, no. 1, p. 67-77.
- Sevilla, Al, Beaver, Peter, and Cherry, Phil, 1997, Effect of MTBE on the treatability of petroleum hydrocarbons in water, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 403-405.
- Shelley, Suzanne, and Fouhy, Ken, 1994, The drive for cleaner-burning fuel: Chemical Engineering, v. 101, no. 1, p. 61-63.
- Shen, Y.F., Yoo, L.J., Fitzsimmons, S.R., and Yamamoto, M.K., 1997, Threshold odor concentrations of MTBE and other fuel oxygenates, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 407-409.
- Sisse, Kara, 1999, EPA panel urges MTBE cutbacks in gasoline: Chemical Week, Aug., p. 13.
- Small, M.C., and Weaver, Jim, 1999, An updated conceptual model for subsurface fate and transport of MTBE and benzene, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 209-220.
- Small, M.C., and Weaver, Jim, 1999, LUST Risk a model for predicting exposure to benzene and MTBE in ground water, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 90-91.
- Smith, D.F., Kleindienst, T.E., Hudgens, E.E., McIver, C.D., and Bufalini, J.J., 1991, The photooxidation of methyl tertiary butyl ether: International Journal of Chemical Kinetics, v. 23, no. 10, p. 907-924.
- Smith, S.L., and Duffy, L.K., 1995, Odor and health complaints with Alaskan gasolines: Chemical Health & Safety, v. 2, no. 3, p. 32-38.
- Smith, D.F., McIver, C.D., and Kleindienst, T.E., 1995, Kinetics and mechanism of the atmospheric oxidation of tertiary amyl methyl ether: International Journal of Chemical Kinetics, v. 27, p. 453-472.
- Smylie, Michael, and Whitten, G.Z., 1992, Use of the urban airshed model to generate and evaluate regional-specific reactivity adjustment factors, *in* Air & Waste Management Association, Annual Meeting & Exhibition, 85th, Kansas City, Mo., June 21-26, 1992 [Proceedings]: AWMA, no. 92-86.12, 14 p.
- Sorrell, R.K., Daly, E.M., Weisner, M.J., and Brass, H.J., 1985, In-home treatment methods for removing volatile organic chemicals: Journal of the American Water Works Association, v. 77, no. 5, p. 72-78.
- Spaize, Kevin, 1998, MTBE--The four-letter word that could mean less water: Proactive Watercraft Community, July/August, p. 50-52.
- Speth, T.F., and Miltner, R.J., 1990, Technical note--Adsorption capacity of GAC for synthetic organics: Journal of the American Water Works Association, v. 82, no. 2, p. 72-75.
- Squillace, P.J., Pope, D.A., and Price, C.V., 1995, Occurrence of the gasoline additive MTBE in shallow ground water in urban and agricultural areas: U.S. Geological Survey Fact Sheet FS-114-95, 4 p.

- Squillace, P.J., 1996, A review of the environmental behavior and fate of fuel oxygenates [abs.], in Society of Environmental Toxicology and Chemistry abstract book, 17th, Washington, D.C., November 17-21, 1996: Washington, D.C., SETAC, p. 114-115.
- Squillace, P.J., Pankow, J.F., and Zogorski, J.S., 1998, Environmental behavior and fate of methyl *tert*-butyl ether (MTBE), in The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998 [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 4-9.
- Squillace, P.J., Moran, M.J., and Clawges, R.M., 1999, Occurrence of MTBE in ground water of the United States, 1993-98, and a preliminary analysis of explanatory variables [CD ROM], in American Water Works Association Annual Conference, Chicago, Ill., June 20-24, 1999 [Proceedings]: American Water Works Association.
- Squillace, P.J., Moran, M.J., and Clawges, R.M., 1999, Occurrence of MTBE in ground water of the United States, 1993-98, and logistic regression analysis of explanatory factors [abs.], in EOS Transactions, Fall Meeting, San Francisco, Calif., Dec. 13-17, 1999: Washington, D.C., American Geophysical Union, v. 80, no. 46, Nov. 16, 1999 Supplement, p. F420.
- Squillace, P.J., Zogorski, J.S., Wilber, W.G., and Price, C.V., 1996, Preliminary assessment of the occurrence and possible sources of MTBE in groundwater in the United States, 1993-1994: Environmental Science & Technology, v. 30, no. 5, p. 1721-1730.
- Squillace, P.J., Pankow, J.F., Korte, N.E., and Zogorski, J.S., 1996, Environmental behavior and fate of methyl *tert*-butyl ether (MTBE): U.S. Geological Survey Fact Sheet FS-203-96, 6 p.
- Squillace, P.J., Pankow, J.F., Korte, N.E., and Zogorski, J.S., 1997, Review of the environmental behavior and fate of methyl *tert*-butyl ether: Environmental Toxicology and Chemistry, v. 16, no. 9, p. 1836-1844.
- Squillace, P.J., Zogorski, J.S., Wilber, W.G., and Price, C.V., 1997, Preliminary assessment of the occurrence and possible sources of MTBE in groundwater in the United States, 1993-1994, in American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 372-374.
- Stackelberg, P.E., Hopple, J.A., and Kauffman, L.F., 1997, Occurrence of nitrate, pesticides, and volatile organic compounds in Kirkwood-Cohansey Aquifer System, Southern New Jersey: U.S. Geological Survey Water-Resources Investigation Report WRIR 97-4241, 8 p.
- Stackelberg, P.E., O'Brien, A.K., and Terracciano, S.A., 1997, Occurrence of MTBE in surface and ground water, Long Island, New York, and New Jersey, in American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 394-397.
- Stanley, C.C., 1998, MTBE - The need for a balanced perspective, in The Southwest Focused Ground Water Conference--Discussing the Issue of MTBE and Perchlorate in Ground Water, Anaheim, Calif., June 3-4, 1998 [Proceedings]: Anaheim, Calif., National Ground Water Association, p. 76-77.
- Stelljes, Mark, 1997, Issues associated with the toxicological data on MTBE, in American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 401-403.
- Stefan, M.I., Mack, John, and Bolton, J.R., 2000, Degradation pathways during the treatment of methyl *tert*-butyl ether by the UV/H₂O₂ process: Environmental Science and Technology, v. 34, p. 650-658.

- Steffan, R.J., McClay, Kevin, Vainberg, Simon, Condee, C.W., and Zhang, Donglu, 1997, Biodegradation of the gasoline oxygenates methyl *tert*-butyl ether, ethyl *tert*-butyl ether, and *tert*-amyl methyl ether by propane-oxidizing bacteria: *Applied and Environmental Microbiology*, v. 63, no. 11, p. 4216-4222.
- Stephenson, R.M., 1992, Mutual solubilities--Water-ketones, water-ethers, and water-gasoline-alcohols: *Journal of Chemical Engineering Data*, v. 37, no. 1, p. 80-95.
- Stocking, Andrew, Peterson, Steve, and Kavanaugh, M.C., 1998, Remediation technologies--Design, selection, and optimization of recovery systems for methyl *tert*-butyl ether, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference*, Houston, Tex., Nov. 11-13, 1998 [Proceedings]: Houston, Tex., National Ground Water Association, and American Petroleum Institute, p. 569-570.
- Stocking, Andrew, McDonald, Shane, Woll, Bryn, and Kavanaugh, Michael, 1999, Evaluation of fate and transport of methyl tertiary butyl ether (MTBE) in gasoline following a small spill, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation*, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 229-246.
- Streete, P.J., Ruprah, Manjit, Ramsey, J.D., and Flanagan, R.J., 1992, Detection and identification of volatile substances by headspace capillary gas chromatography to aid the diagnosis of acute poisoning: *Analyst*, v. 117, no. 7, p. 1111-1127.
- Stubblefield, W.A., Burnett, S.L., Hockett, J.R., and Naddy, R., 1997, Evaluation of the acute and chronic aquatic toxicity of methyl tertiary-butyl ether (MTBE), *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 429-430.
- Stump, F.D., Knapp, K.T., and Ray, W.D., 1990, Seasonal impact of blending oxygenated organics with gasoline on motor vehicle tailpipe and evaporative emissions: *Journal of the Air Waste Management Association*, v. 40, no. 6, p. 872-880.
- Suflita, J.M., and Mormile, M.R., 1993, Anaerobic biodegradation of known and potential gasoline oxygenates in the terrestrial subsurface: *Environmental Science & Technology*, v. 27, no. 5, p. 976-978.
- Sweeney, R.E., Mayhew, J.D., and Boust, Robert, 1999, Dispersion/biodegradation monitoring--Method to evaluate MTBE biodegradation, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation*, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 373-385.
- Sykes, Richard., Tikkanen, Maria, Pierner, Jim, Owen, Dave, Abbors, Steve, Berger, Robert, English, Roy, and Farr, Cheryl, 1999, Watershed investigation and protection program for MTBE at East Bay Municipal Utility District [CD ROM], *in* American Water Works Association Annual Conference, Chicago, Ill., June 20-24, 1999 [Proceedings]: American Water Works Association.
- Tardiff, R.G., and Stern, B.R., 1997, Estimating the risks and safety of methyl-tertiary-butyl ether (MTBE) and tertiary butyl alcohol (TBA) in tap water for exposures of varying duration, *in* American Chemical Society Division of Environmental Chemistry preprints of papers, 213th, San Francisco, Calif.: ACS, v. 37, no. 1, p. 430-432.
- Task Force on Health Effects of Reformulated Gas, 1995, Assessment of the health effects of reformulated gasoline in Maine: Clean Air Stakeholders Conference, The Joint Standing Committee on Natural Resources, Maine State Legislature, May 1995, 40 p.

- Taylor, J.R., and O'Brien, T.J., 1993, Evaluating residential water supply wells in a fractured bedrock aquifer contaminated with MTBE--A case study: *Ground Water Management*, v. 16, p. 929-937.
- Tepper, J.S., Jackson, M.C., McGee, J.K., Costa, D.L., and Graham, J.A., 1994, Estimation of respiratory irritancy from inhaled methyl tertiary butyl ether in mice: *Inhalation Toxicology*, v. 6, no. 6, p. 563-569.
- Terracciano, S.A., and O'Brien, A.D., 1997, Occurrence of volatile organic compounds in streams on Long Island, New York, and in New Jersey--Overview of available data and reconnaissance sampling: U.S. Geological Survey Fact sheet, FS-063-97, 4 p.
- Thomson, B.M., Finrock, D.J., and McHaley, C.P., 1999, Development of permeable barriers for groundwater remediation--Air stripping of methyl tertiary-butyl ether (MTBE): *Journal of Environmental Science and Health*, v. A34, no. 2, p. 263-287.
- Tratnyek, P.G., Church, C.D., and Pankow, J.F., 1996, Rates and products of degradation for MTBE and other oxygenate fuel additives in the subsurface environment [abs.], in *Society of Environmental Toxicology and Chemistry abstract book*, 17th, Washington, D.C., November 17-21, 1996: Washington, D.C., SETAC, p. 310.
- Truong, K.N., and Parmele, C.S., 1992, Cost-effective alternative treatment technologies for reducing the concentrations of methyl tertiary butyl ether and methanol in groundwater, in Calabrese, E.J. and Kostecki, P.T., eds., *Hydrocarbon contaminated soils and groundwater*, v. 2: Chelsea, Mich., Lewis Publishers, Inc., p. 461-486.
- Tuazon, E.C., Carter, W.P.L., Aschmann, S.M., and Atkinson, R., 1991, Products of the gas-phase reaction of methyl *tert*-butyl ether with the OH radical in the presence of NO_x: *International Journal of Chemical Kinetics*, v. 23, no. 11, p. 1003-1015.
- Tulloch, Christine, Matthews, David, Scott, Seyfried, Beatty, Jenifer, and Levine-Fricke, L.F.R., 1999, Occurrence of methyl tertiary butyl ether (MtBE) in groundwater at operating UST facilities in Santa Clara County--A study to assess groundwater vulnerability, in Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation*, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 354-365.
- Tyner, Larry, Brown, Kandi, Perina, Tom, Daftary, David, Sibbett, Bruce, 1998, Natural attenuation of BTEX and MTBE under complex hydrogeological conditions, in Wickramanayake, G.B., and Hinchee, R.E., eds., *Physical, Chemical and Thermal Technologies--Remediation of Chlorinated and Recalcitrant Compounds*, First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, Calif., May 18-21, 1998: Columbus, Ohio, Battelle Press, p. 333-339.
- U.S. Environmental Protection Agency, 1993a, Assessment of potential health risks of gasoline oxygenated with methyl tertiary butyl ether (MTBE): Washington, D.C., Office of Research and Development, EPA/600/R-93/206, 50 p.
- U.S. Environmental Protection Agency, 1993b, An investigation of exposure to MTBE and gasoline among motorists and exposed workers in Albany, New York: Atlanta, Ga., Centers for Disease Control and Prevention, National Center for Environmental Health, Division of Environmental Hazards and Health Effects, and New York State Department of Health, 24 p.
- U.S. Environmental Protection Agency, 1994, Health risk perspectives on fuel oxygenates: Washington, D.C., Office of Research and Development, EPA 600/R-94/217, 11 p.

- U.S. Environmental Protection Agency, 1996, Drinking water regulations and health advisories: Washington, D.C., Office of Water, EPA 822-R-96-001, 16 p.
- U.S. Environmental Protection Agency, 1997, Drinking water advisory--Consumer acceptability advice and health effects analysis on methyl tertiary-butyl ether (MtBE): Washington, D.C., Office of Water, EPA-822-F-97-009, 43 p.
- U.S. Environmental Protection Agency, 1998, Oxygenates in Water--Critical information and research needs: Washington, D.C., Office of Research and Development, EPA-600-R-98/048, 65 p.
- U.S. Environmental Protection Agency, 1998, MTBE fact sheet #2--Remediation of MTBE contaminated soil and groundwater: Washington, D.C., Office of Solid Waste and Emergency Response, 5 p.
- U.S. Geological Survey, 1995, Denver's urban ground-water quality--Nutrients, pesticides, and volatile organic compounds: USGS Fact Sheet FS 106-95, 2 p.
- U.S. National Archives and Records Administration, Federal Registrar's Office, 1995, Testing consent order for tertiary amyl methyl ether: Federal Register, v. 60, no. 54, p. 14910-14911.
- Unzelman, G.H., 1990, Reformulated gasolines will challenge product-quality maintenance: Oil & Gas Journal, v. 88, no. 15, p. 43-48.
- Unzelman, G.H., 1991, U.S. Clean Air Act expands role for oxygenates: Oil & Gas Journal, v. 89, no. 15, p. 44-49.
- Unzelman, G.H., 1995, Impact of oxygenates on petroleum refining--Part I--Historical Review: Fuel Reformulation, v. 5, no. 3, p. 51-54.
- Vainiotalo, Sinikka, and Ruonakangas, Anne, 1999, Tank truck driver exposure to vapors from oxygenated or reformulated gasolines during loading and unloading: American Industrial Hygiene Association Journal, v. 60, p. 518-525.
- Vainiotalo, Sinikka, Peltonen, Yrjo, and Pfaffli, Pirkko, 1998, Customer exposure to methyl *tert*-butyl ether during gasoline refueling: Applied Occupational and Environmental Hygiene, v. 13, no. 10, p. 727-732.
- Vainiotalo, Sinikka, Pekari, Kaija, and Aitio, Antero, 1998, Exposure to methyl *tert*-butyl ether from gasoline during tank lorry loading and its measurement using biological monitoring: International Archives of Occupational and Environmental Health, v. 71, p. 391-396.
- Vainotalo, Sinikka, Peltonen, Yrjo, and Pfaffli, Pirkko, 1998, MTBE concentrations in ambient air in the vicinity of service stations: Atmospheric Environment, v. 32, no. 20, p. 3503-3509.
- Vainiotalo, Sinikka, Peltonen, Yrjo, Ruonakangas, Anne, and Pfaffli, Pirkko, 1999, Customer exposure to MTBE, TAME, C6 alkyl methyl ethers, and benzene during gasoline refueling: Environmental Health Perspectives, v. 107, no. 2, p. 133-140.
- Veith, G.D., Call, D.J., and Brooke, L.T., 1983, Structure-toxicity relationships for the fathead minnow, *Pimephales promelas*--Narcotic industrial chemicals: Canadian Journal of Fisheries and Aquatic Science, v. 40, no. 6, p. 743-748.
- Wallington, T.J., Dagaut, Philippe, Liu, Renzhang, and Kurylo, M.J., 1988, Gas-phase reactions of hydroxyl radicals with the fuel additives methyl *tert*-butyl ether and *tert*-butyl alcohol over the temperature range 240-440 K: Environmental Science & Technology, v. 22, no. 7, p. 842-844.

- Wardwell, D.A., 1999, Groundwater flow sensor monitoring of air sparging, *in* Alleman, B.C., and Leeson, Andrea, eds., *In Situ Bioremediation of Petroleum Hydrocarbons and Other Organic Compounds*, V. 3, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 47-57.
- Watson, J.G., Chow, J.C., Pritchett, L.C., Houck, J.A., Ragazzi, R.A., and Burns, S., 1990, Chemical source profiles for particulate motor vehicle exhaust under cold and high altitude operating conditions: *The Science of the Total Environment*, v. 93, p. 183-190.
- Weaver, J.W., Haas, J.E., and Wilson, J.T., 1996, Analysis of the gasoline spill at East Patchogue, New York, *in* Conference on Non-Aqueous Phase Liquids in the Subsurface Environment, Nov. 12-14, Washington, D.C. [Proceedings], p.707-718.
- Weaver, J.W., Haas, J.E., and Sosik, Charles, 1999, Characteristics of gasoline releases in the water table aquifer of Long Island, *in* Stanley, Anita, ed., *Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation*, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 260-261.
- White, M.C., Johnson, C.A., Ashley, D.L., Buchta, T.M., and Pelletier, D.J., 1995, Exposure to methyl tertiary-butyl ether from oxygenated gasoline in Stamford, Connecticut: *Archives of Environmental Health*, v. 50, no. 3, p. 183-189.
- Wibowo, A.A.E., 1994, DECOS and NEG basis for an occupational standard--Methyl-*tert*-butyl ether: Solna, Sverige, National Institute of Occupational Health, 22 p.
- Widdowson, M.A., Ray, R.P., Reeves, H.W., Aelion, C.M., and Holbrooks, K.D., 1995, Investigation of soil venting-based remediation at a UST site in the Appalachian Piedmont, *in* Schepart, B.S., ed., *Bioremediation of pollutants in soil and water*: Philadelphia, Pa., American Society for Testing and Materials, Special Technical Publication 1235, p. 135-148.
- Wiesmann, Gerrit, and Cornitius, Tim, 1995, Falling MTBE demand bursts the methanol bubble: *Chemical Week*, v. 156, no. 8, p. 14.
- Wigglesworth, Terry, 1999, MTBE--A watertight case?: *Chemistry and Industry*, May, no. 10, p. 408.
- Williams, C.H., Crow, W.L., and Lewandowski, P.S., 1990, Evaluation of community exposure to airborne SARA Title III section 313 chemicals emitted from petroleum refineries: U.S. Environmental Protection Agency's Waste Management Association, Atmospheric Research and Exposure Assessment Laboratory and Waste Management Association, Measurement of toxic and related air pollutants, Journal Code 33847, p. 948-954.
- Williams, Bob, 1995, MTBE, ethanol advocates' squabble may complicate RFG implementation: *Oil & Gas Journal*, v. 93, no. 7, p. 17-22.
- Williams, T.M., Cattley, R.C., and Borghoff, S.J., 2000, Alterations in endocrine responses in male Sprague-Dawley rats following oral administration of methyl *tert*-butyl ether: *Toxicological Sciences*, v. 54, p. 168-176.
- Wilson, B.H., Shen, Hai, Cho, Jong, and Vardy, James, 1999, Use of bioscreen to evaluate natural attenuation of MTBE, *in* Alleman, B.C., and Leeson, Andrea, eds., *Natural Attenuation of Chlorinated Solvents, Petroleum Hydrocarbons, and Other Organic Compounds*, V. 1, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 115-120.

- Wilson, Elizabeth, 1997, Scientists wrangle over MTBE controversy: Chemical & Engineering News, v. 75, no. 18, p. 54-56.
- Wilson, R.D., Schirmer, Mario, Naas, C.N., Smith, Amanda, Smith, Christy, Scow, K.M., Hyman, M.R., and Mackay, D.M., 1999, Laboratory-scale evaluation of in situ aerobic MTBE biodegradation options for Vandenberg Air Force Base, California, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation, Houston, Tex., Nov. 17-19, 1999 [Proceedings]: National Ground Water Association, and American Petroleum Institute, p. 167-176.
- Wilt, Gloria, 1999, Sleuthing MTBE with statistical data: Science & Technology Review, April, Lawrence Livermore National Laboratory, p. 21-23.
- Worthington, M.A., and Perez, E.J., 1993, Dating gasoline releases using ground-water chemical analyses--Case studies: Ground Water Management, v. 17, p. 203-217.
- Woelfenden, Elizabeth, 1997, Monitoring VOCs in air using sorbent tubes followed by thermal desorption-capillary GC analysis--Summary of data and practical guidelines: Journal of the Air & Waste Management Association, v. 47, p. 20-36.
- Xle, Yuefeng, and Reckhow, D.A., 1994, Formation of halogenated artifacts in brominated, chloraminated, and chlorinated solvents: Environmental Science & Technology, v. 28, no. 7, p. 1357-1360.
- Yeh, C.K., and Novak, J.T., 1991, Anaerobic biodegradation of oxygenates in the subsurface, *in* Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Restoration, Houston, Tex., November 20-22, 1991, Book 8 [Proceedings]: Houston, Tex., National Water Well Association and American Petroleum Institute, p. 427-441.
- Yeh, Kuei-Jyum, 1992, Degradation of gasoline oxygenates in the subsurface [abs.]: Dissertation Abstracts International, v. 53, no. 2, p. 757-B.
- Yeh, C.K., and Novak, J.T., 1994, Anaerobic biodegradation of gasoline oxygenates in soils: Water Environment Research, v. 66, no. 5, p. 744-752.
- Yeh, C.K., and Novak, J.T., 1995, The effect of hydrogen peroxide on the degradation of methyl and ethyl *tert*-butyl ether in soils: Water Environment Research, v. 67, no. 5, p. 828-834.
- Yoshikawa, M., Arashidani, K., Katoh, T., Kawamoto, T., and Kodama, Y., 1994, Pulmonary elimination of methyl tertiary-butyl ether after intraperitoneal administration in mice: Archives of Toxicology, v. 68, no. 8, p. 517-519.
- Young, W.F., Horth, H., Crane, R., Ogden, T., and Arnott, M., 1996, Taste and odour threshold concentrations of potential potable water contaminants: Water Research, v. 30, no. 2, p. 331-340.
- Zapeczka, O.S., and Baehr, A.L., Methyl *tert*-butyl ether (MTBE) in lakes in Byram Township, Sussex County, New Jersey, 1998, and implications for ground water vulnerability, *in* Morganwalp, D.W., and Buxton, H.T., eds., U.S. Geological Survey Toxics Hydrology Program--Proceedings of the Technical Meeting, Volume. 2, Contamination of Hydrologic Systems and Related Ecosystems Charleston, S.C., Mar. 8-12, 1999 [Proceedings]: U.S. Geological Survey Water Resources Investigations Report, WRIR 99-4018B, p. 405-414.
- Zhao, Xiaohong, Smith, S.L., and Duffy, L.K., 1995, Effects of ethanol as an additive on odor detection thresholds of Alaskan gasolines at sub-arctic temperatures: Chemosphere, v. 31, no. 11/12, p. 4531-4540.

- Zenker, M.J., Borden, R.C., and Barlaz, M.A., 1999, Investigation of the intrinsic biodegradation of alkyl and cyclic ethers, *in* Alleman, B.C., and Leeson, Andrea, eds., Natural Attenuation of Chlorinated Solvents, Petroleum Hydrocarbons, and Other Organic Compounds, Fifth International In Situ and Onsite Bioremediation Symposium, San Diego, Calif., April 19-22, 1999 [Proceedings]: Columbus, Ohio, Battelle Publications, p. 165-170.
- Zogorski, J.S., 1996, Fuel oxygenates and water quality--Findings and recommendations of the Interagency Oxygenated Fuel Assessment, *in* Stanley, Anita, ed., Petroleum Hydrocarbons and Organic Chemicals in Ground Water--Prevention, Detection, and Remediation Conference, Houston, Tex., Nov. 13-15, 1997, [Proceedings]: Houston, Tex., National Ground Water Association and American Petroleum Institute, p. 3.
- Zogorski, J.S., Baehr, A.L., Bauman, B.M., Conrad, D.L., Drew, R.T., Korte, N.E., Lapham, W.W., Morduchowitz, A., Pankow, J.F., and Washington, E.R., 1997, Significant findings and water-quality recommendations of the Interagency Oxygenated Fuel Assessment, *in* Kostecki, P.T., Calabrese, E.J., and Bonazountas, Marc, eds., Contaminated Soils: Amherst, Mass, Amherst Scientific Publishers, v. 2, p. 661-679.
- Zogorski, J.S., Delzer, G.C., Bender, D.A., Squillace, P.J., Lopes, T.J., Baehr, A.L., Stackelberg, P.E., Landmeyer, J.E., Boughton, C.J., Lico, M.S., Pankow, J.F., Johnson, R.L., and Thomson, N.R., 1998, MTBE--Summary of findings and research by the U.S. Geological Survey, *in* 1998 Annual Conference of Water Quality, June 21-25, 1998, Dallas, Texas [Proceedings]: American Water Works Association, v. D, p. 287-309.

Websites:

<http://www.nd.edu/~cest/kulpa3.html>

<http://www.bioremedy.com/main.htm>

<http://www.api.org/ehs/mtbelink.htm>

<http://tsrtp.ucdavis.edu/mtbe/>